

Large-signal Power MOSFETs(1)

The Sanyo J-MOS series utilizes Sanyo's own fine fabrication process for power devices to develop an entire series of ultrahigh performance power devices capable of high voltage, high speed and large current operation.

With performance of wide applications for virtually any types of power electronic equipment, the UH Series, AP Series and LD Series offer the most suitable devices to meet specific needs.

In addition to the below SANYO has a wide variety of package of small-signal power MOSFET series. See the tables on other pages.

LD series (Low Drive)

The LD Series, an ingenious hybrid of the LSI-class fine process and the power process, has higher transfer characteristics and lower on-state resistance. The result is a low voltage drive series which saturates at a VGS bias of 4V.

This series is most effective for a power supply controlled by a 5V drive logic IC.

The surface mounting SMP and ZP package enables higher density assembly and higher reliability.

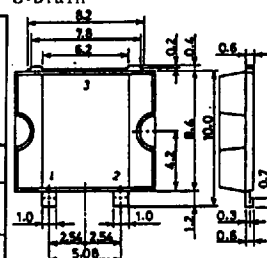
Application *Li ion battery, notebook PC, AV equipment, personal equipment etc.

VDSS 30V system

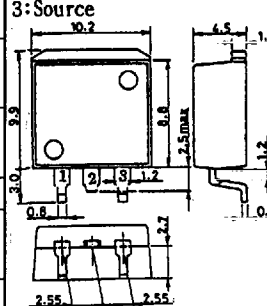
(2SJ type:P channel (-) sign is omitted.)

Type No.	Package	Absolute Maximum Ratings /Ta=25℃					Electrical Characteristics/Ta=25℃						Type No.		
		V _{DSS} (V)	V _{GSS} (V)	I _D (A)	I _{DP} (A)	P _D T _c =25℃ (W)	V _{GS(off)} min ~ max (V)			R _{DS(on)} V _{GS} =4V (Ω)typ max		R _{DS(on)} V _{GS} =10V (Ω)typ max		Ciss typ (pF)	
2SJ466	Z P	30	±20	35	140	50	1	~	2	30m/40m		20m/30m		4000	2SJ466
2SK2432			±20	35	140	50	1	~	2	25m/35m		15m/25m		2000	2SK2432
2SK3066			±20	30	120	30	1	~	2.5	25m/35m		15m/22m		1600	2SK3066
2SJ257	S M P		±15	10	40	50	1	~	2	120m/170m		85m/120m		1000	2SJ257
2SJ258			±20	12	48	60	1	~	2	95m/130m		70m/95m		1300	2SJ258
2SJ259			±20	20	80	70	1	~	2	55m/75m		40m/55m		2000	2SJ259
2SJ400			±20	35	140	70	1	~	2	30m/40m		25m/35m		4000	2SJ400
2SK1889			±15	18	72	50	1	~	2	55m/75m		40m/55m		1000	2SK1889
2SK1890	±20		22	88	60	1	~	2	40m/55m		30m/40m		1300	2SK1890	
2SK1891	±15		35	140	70	1	~	2	25m/35m		15m/25m		2000	2SK1891	
2SJ251	TO-220		±15	10	40	50	1	~	2	120m/170m		85m/120m		1000	2SJ251
2SJ252			±20	12	48	60	1	~	2	95m/130m		70m/95m		1300	2SJ252
2SJ253		±15	20	80	70	1	~	2	55m/75m		40m/55m		2000	2SJ253	
2SK1883		±15	18	72	50	1	~	2	55m/75m		40m/55m		1000	2SK1883	
2SK1884		±20	22	88	60	1	~	2	40m/55m		30m/40m		1300	2SK1884	
2SK1885	±20	35	140	70	1	~	2	25m/35m		15m/25m		2000	2SK1885		
2SK2977LS	TO-220FI (LS)	±20	30	120	30	1	~	2.5	25m/35m		15m/22m		1600	2SK2977	
2SJ254	TO-220ML	±15	8	32	25	1	~	2	120m/170m		85m/120m		1000	2SJ254	
2SJ255		±20	10	40	25	1	~	2	95m/130m		70m/95m		1300	2SJ255	
2SJ256		±15	18	72	30	1	~	2	55m/75m		40m/55m		2000	2SJ256	
2SK1886		±15	15	60	25	1	~	2	55m/75m		40m/55m		1000	2SK1886	
2SK1887		±20	20	80	25	1	~	2	40m/55m		30m/40m		1300	2SK1887	
2SK1888	±15	30	120	30	1	~	2	25m/35m		15m/25m		2000	2SK1888		

Case Outlines
(unit:mm)
SANYO:ZP
1:Gate, 2:Source
3:Drain



SANYO:SMP-FD
1:Gate, 2:Drain
3:Source

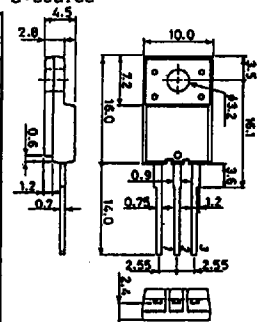


SANYO:TO-220FI (LS)

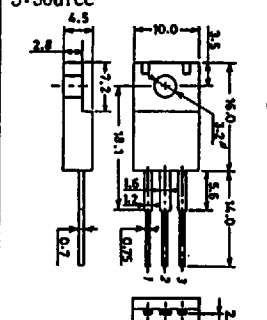
VDSS 60V system

2SJ414	Z P	±20	15	72	50	1 ~ 2	80m/110m	60m/80m	1900	2SJ414
2SJ415		±20	8	40	40		150m/200m	110m/150m	1230	2SJ415
2SK2433		±20	25	120	50		40m/55m	30m/40m	1900	2SK2433
2SJ266	SMP	±15	8	32	50	1 ~ 2	200m/270m	150m/200m	950	2SJ266
2SJ267		±20	10	40	60		150m/200m	110m/150m	1230	2SJ267
2SJ268		±15	18	72	70		80m/110m	60m/80m	1900	2SJ268
2SJ340		±20	30	120	70		40m/55m	30m/40m	3800	2SJ340
2SK1898		±15	15	60	50		80m/110m	60m/80m	950	2SK1898
2SK1899	TO-220	±20	18	72	60	1 ~ 2	70m/95m	50m/70m	1230	2SK1899
2SK1900		±15	30	120	70		40m/55m	30m/40m	1900	2SK1900
2SK2164		±20	45	180	70		20m/27m	15m/20m	3800	2SK2164
2SJ260	TO-220	±15	8	32	50	1 ~ 2	200m/270m	150m/200m	950	2SJ260
2SJ261		±20	10	40	60		150m/200m	110m/150m	1230	2SJ261
2SJ262		±15	18	72	70		80m/110m	60m/80m	1900	2SJ262
2SJ348		±20	30	120	70		40m/55m	30m/40m	3800	2SJ348
2SJ478		±20	20	80	80		50m/90m	35m/45m	3000	2SJ478
2SK1892	TO-220	±15	15	60	50	1 ~ 2	80m/110m	60m/80m	950	2SK1892
2SK1893		±20	18	72	60		70m/95m	50m/70m	1230	2SK1893
2SK1894		±15	30	120	70		40m/55m	30m/40m	1900	2SK1894
2SJ263	TO-220ML	±15	6	24	25	1 ~ 2	200m/270m	150m/200m	950	2SJ263
2SJ264		±20	8	32	25		150m/200m	110m/150m	1230	2SJ264
2SJ265		±15	15	60	30		80m/110m	60m/80m	1900	2SJ265
2SJ339		±20	25	100	40		40m/55m	30m/40m	3800	2SJ339
2SJ519		±20	20	80	35		45m/70m	30m/40m	3000	2SJ519
2SK1895	TO-220ML	±15	12	48	25	1 ~ 2	80m/110m	60m/80m	950	2SK1895
2SK1896		±20	15	60	25		70m/95m	50m/70m	1230	2SK1896
2SK1897		±15	25	100	30		40m/55m	30m/40m	1900	2SK1897
2SK2163		±20	40	160	40		20m/27m	15m/20m	3800	2SK2163
2SJ413	TO-3PML	±20	50	200	70	1 ~ 2	20m/30m	15m/20m	7600	2SJ413

1:Gate, 2:Drain
3:Source



SANYO:TO-220ML
1:Gate, 2:Drain
3:Source



Underlined type Nos. are before mass production.

Precaution Take care to prevent device breakage from static electricity because MOSFETs cannot withstand much static electricity.

These specifications are subject to change without notice.

Next page.

SANYO Discrete Device Package Outlines(unit:mm)

Small-Signal Transistors

Outlines name SSFP, SMCP, MCP, MCP4/6, CP, CP4/5/6, CPH3/5/6, PCP, PCP4/5, XP5/6, TP, TP-FA, MFP6, TSSOP8, SOP8, SPA, NP, MP, NMP, FLP, TO-126, TO-126ML, TO-126LP

Large-Signal Transistors

ZP, SMP, SMP-FD, TO-220, TO-220C1, TO-220ML, TO-220FI (LS), TO-220MF, TO-3PB, TO-3PML, TO-3PBL, TO-3JML

SANYO Transistor Package Name List.

Surface Mount Types

SSFP Super Small Flat Package
SMCP Super Mini Chip Pack.
MCP Mini Chip Pack.
MCP4/6 Mini Chip Pack. (FH type)
CP Chip Pack.
CP5/6 Chip Pack. (FC type)
CPH3/5/6 * Chip Pack high-power
PCP Power Chip Pack.
PCP4/5 Power Chip Pack. (FP type)
XP (FX type)
TSSOP8 (FTS, FTD type)
SOP8 (FW, FSS type)
TP-FA Tiny Package
SMP-FD For large signal
ZP For large signal

Lead Types

NMP New MP
FLP Full Mold Large Package
TO-126LP Large-Power
TO-126ML Micaless
TO-220, 220ML ML:Micaless type
TO-220C1 CI:Compact Isolation
TO-220FI (LS) Full Isolation (leade short type)
TO-220MF Mini Pin Short fin type.
TO-3PB, 3PML Bushless, ML:Micaless
TO-3PML Micaless
TO-3PBL Bushless Large
TO-3JML Jumbo Micaless

PB, BL:no insulating needed.

Notes

Nomenclature of house NOS.
The first several letters of the type Nos. of the FSS, FTD, FW, FTS, FC, FP, FH, series mean:

1'st F : Packages for complex type devices.
(CP5/6, MCP4/6, PCP4/5, XP5/6, SOP8, TSSOP8)
2'nd S: SOP8 package
2'nd W: Double chips
2'nd T: TSSOP8 package
2'nd C: CP5/6 package
2'nd P: PCP4/5 package
2'nd X: XP5/6 package
2'nd D: Dual type
2'nd H: Ultra high freq. type
3'rd S: Single

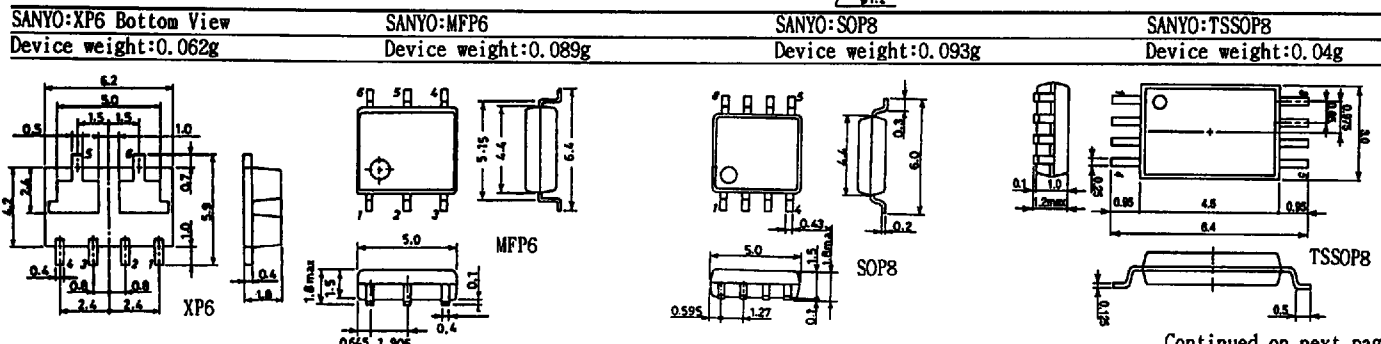
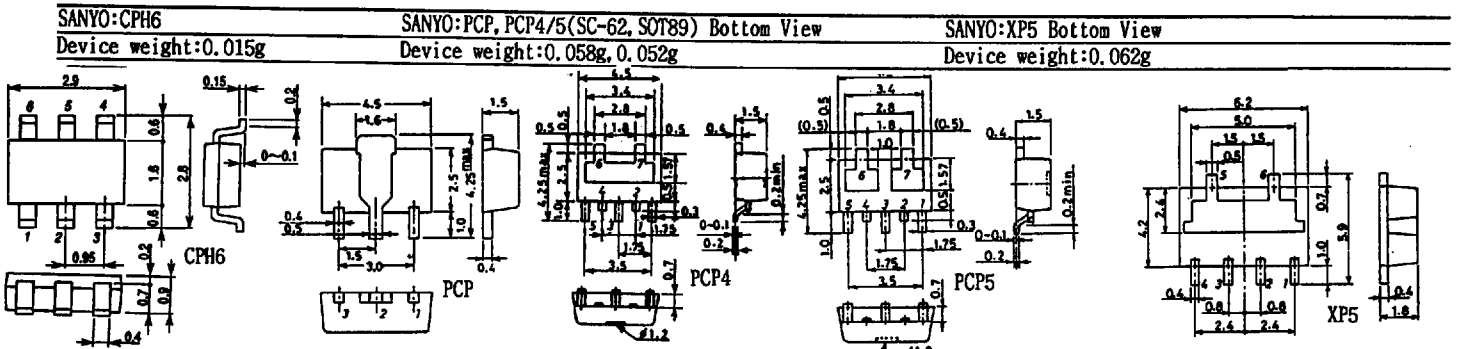
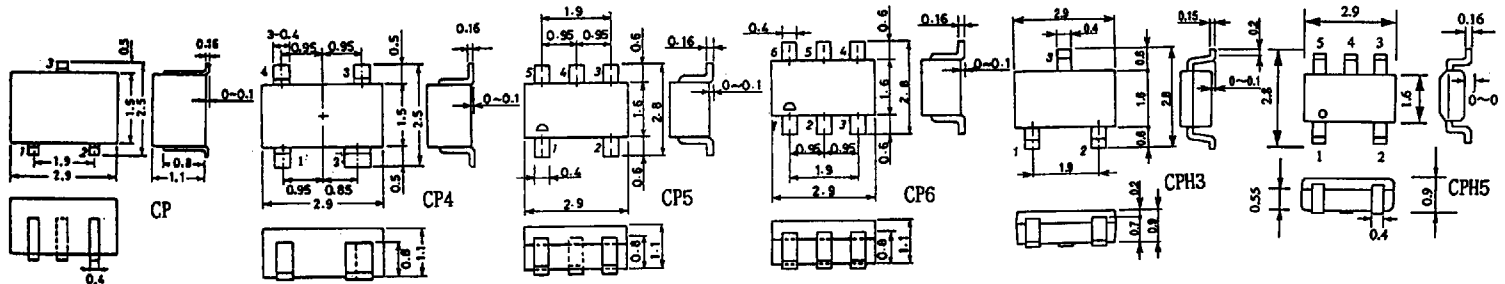
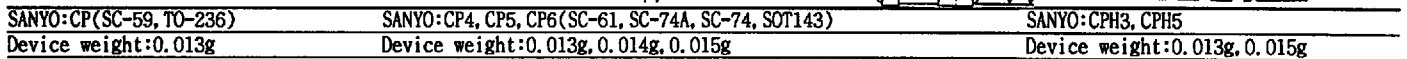
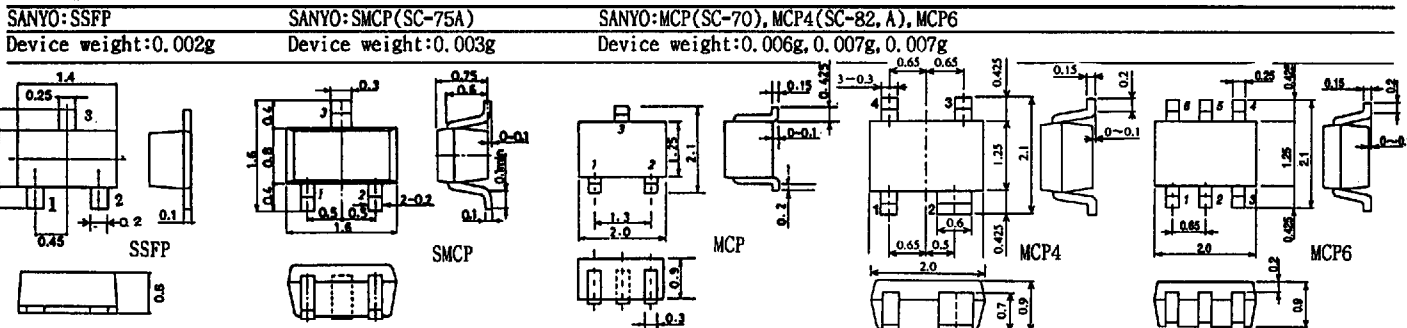
Type Nos. of 1XX or 1XXX are p-channel types.
Type Nos. of 2XX or 2XXX are N-channel types.
XP package is excluded.

*:How to name CPH3/6 devices. Package name followed by 1, 2, 3 or 4 and then tow-digit consecutive Nos. Figures following the package names mean: 1:PNP Tr, 2:NPN Tr, 3:P-ch MOSFET, 4:N-ch MOSFET.

Surface Mount Type Outlines(JEDEC and EIAJ name are in parentheses.)

Top View

Pin Nos. of top view are CAD register Nos. Bottom side : Heat sink side.



Continued on next page

SANYO Discrete Device Package Outlines(unit:mm)

Surface Mount Type Outlines(JEDEC and EIAJ name are in parentheses.)
Top View Pin Nos. of top view are CAD register Nos. Bottom side : Heat sink side.

SANYO:TP, TP-FA(SC-64, SC-63, TO-251)

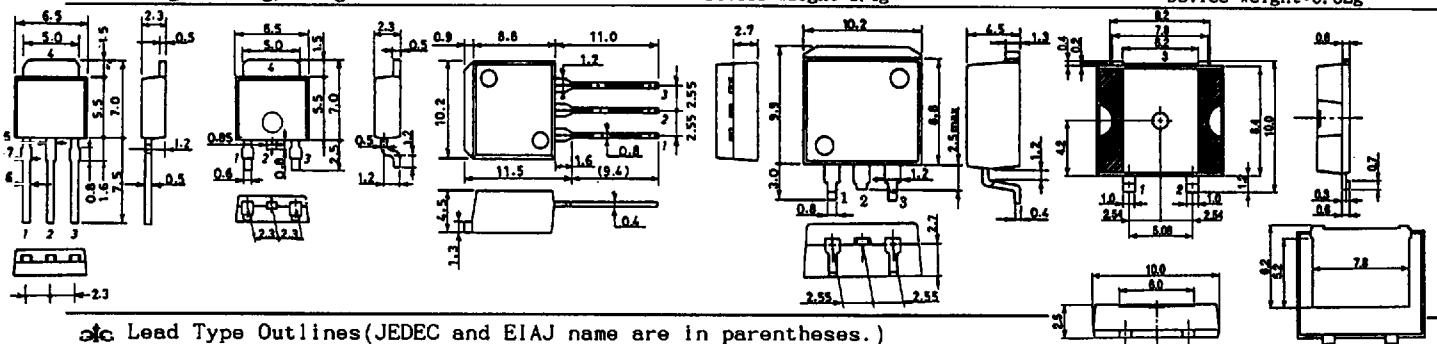
Device weight:0.315g, 0.282g

SANYO:SMP, SMP-FD(forming type)(SC-83)

Device weight:1.4g

SANYO:ZP

Device weight:0.62g



Lead Type Outlines(JEDEC and EIAJ name are in parentheses.)
Top View (Pin No. : CAD register Nos.)

SANYO:SPA(TO-18, TO-39)

Device weight:0.098g

SANYO:NP(SC-43A, TO-92, SOT-54)

Device weight:0.269g

SANYO:MP(SC-51, TO-226)

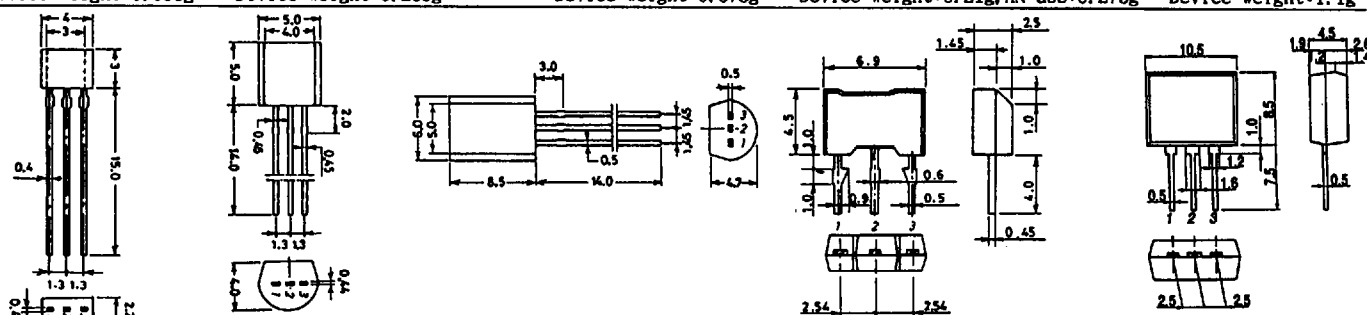
Device weight:0.578g

SANYO:NMP(SC-71)

Device weight:0.21g, AN use:0.275g

SANYO:FLP

Device weight:1.1g

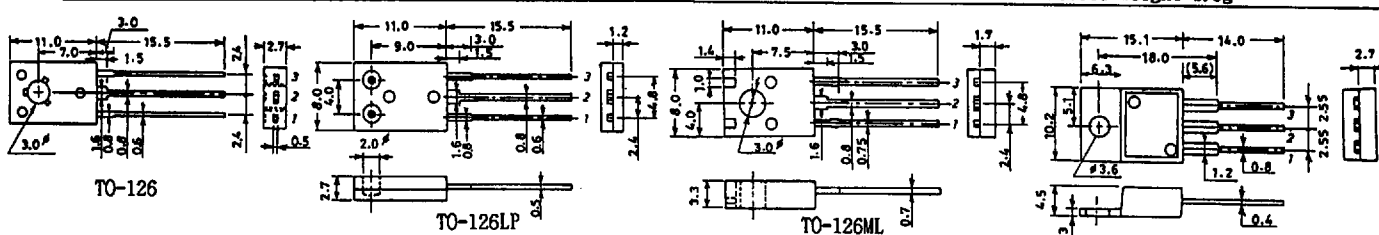


SANYO:TO-126(TO-126, TO-225, SOT-32), TO-126LP, TO-126ML(SOT-82)

Device weight : 0.675g, 0.7g, 0.97g

SANYO:TO-220AB, AB(SC-45, 46, TO-220AA)

Device weight:1.9g



SANYO:TO-220CI

Device weight:1.75g

SANYO:TO-220ML(SC-67, SOT-186)

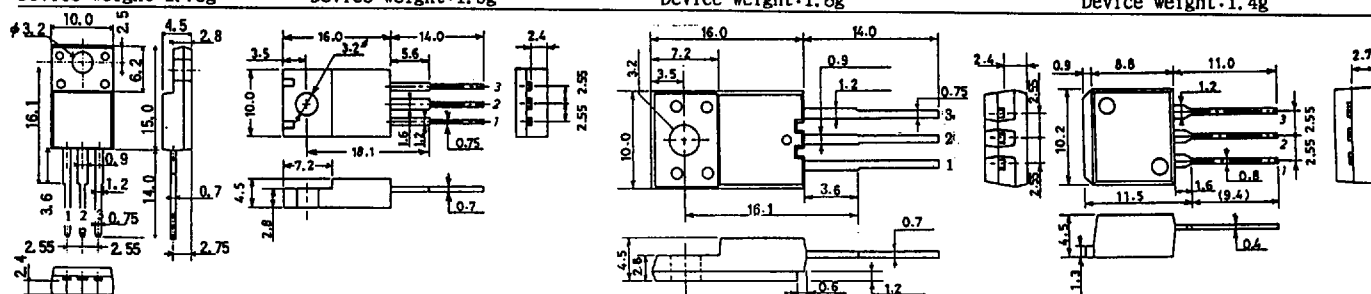
Device weight:1.9g

SANYO:TO-220FI(1S)(SC-67, SOT-189)

Device weight:1.8g

SANYO:TO-220MF

Device weight:1.4g



SANYO:TO-3PB(SC-65, TO-218)

Device weight:5.8g

SANYO:TO-3PML(1SOWATT218)

Device weight:5.3g

SANYO:TO-3PBL(TO-247)

Device weight:9.2g

SANYO:TO-3JML

Device weight:9.2g

