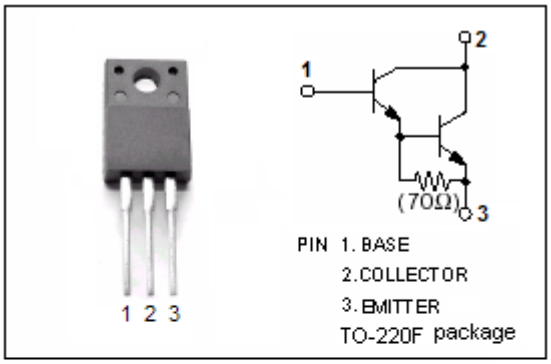
isc Silicon NPN Darlington Power Transistor 2SD2642

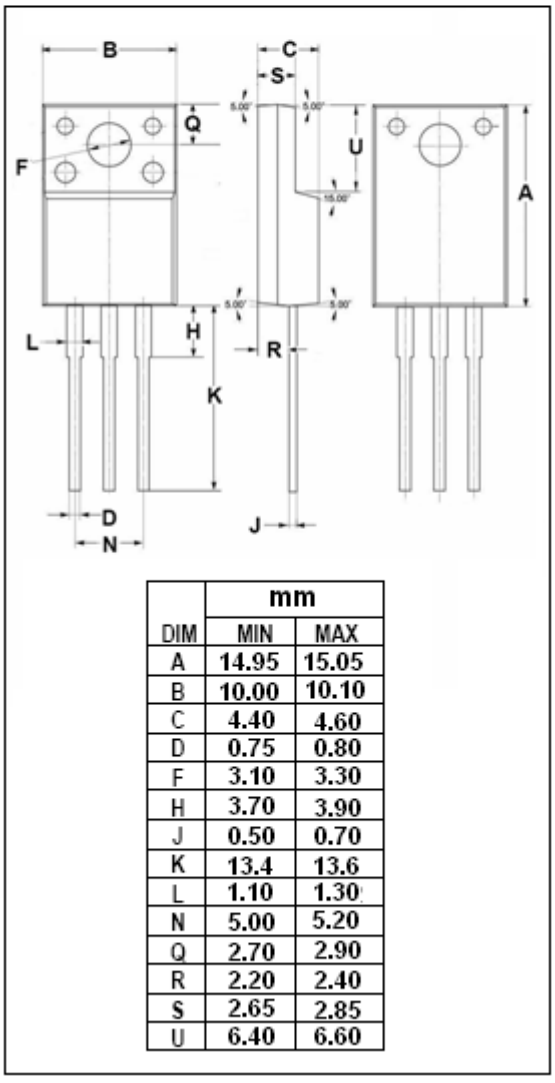


DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 110V(Min)
- High DC Current Gain-
  : h_{FE}= 5000(Min.) @(I_C= 5A, V_{CE}= 4V)
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 2.5V(Max)@ (I_C= 5A, I_B= 5mA)
- Complement to Type 2SB1687

APPLICATIONS

- Designed for audio, series regulator and general purpose applications.



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	110	V
V_{CEO}	Collector-Emitter Voltage	110	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA ; I_B= 0	110			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 5mA			2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 5mA			3.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 110V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 5A; V_{CE}= 4V	5000			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		55		pF
f_T	Current-Gain—Bandwidth Product	I_E= -0.5A ; V_{CE}= 12V		60		MHz
Switching Times						
t_{on}	Turn-on Time	V_{CC}= 30V, R_L= 6Ω, I_C= 5A; I_{B1}= -I_{B2}= 5mA,		0.8		μs
t_{stg}	Storage Time			6.2		μs
t_f	Fall Time			1.1		μs

◆ h_{FE} Classifications

O	P	Y
5000-12000	6500-20000	15000-30000