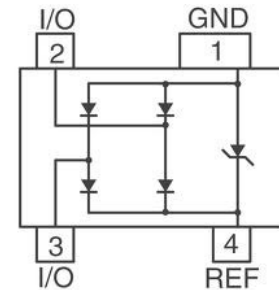


Applications

- Firewire and USB
- Portable electronics
- Video/graphic cards
- High Speed Data Line
- Ethernet=10/100/1000 base T


SOT143-7L

Feature

- Lead free as Standard
- ESD Protection:Level 4
- Low clamping voltage
- Protection one power line and two data lines

IEC Compatibility

- EN61000-4
- 61000-4-2(ESD):Level4 ,Contact:±8kv,Air:±15kv
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):12A,8/20us

Mechanical Characteristics

- Molded JEDEC Sot-143
- The Futurewafer[®] device will meet IEC61000-4-2(ESD)
- Flammability rating UL 94V-0
- Halogen Free

Device Characteristics

Maximum Ratings@25 unless otherwise specified			
Parameter	Symbol	Value	Units
Peak pulse power (tp=8/20us) see fig 1.	PPP	100	Watts
Storage Temperature	TSTG	-55~150	°C
Peak Pulse Current(tp=8/20us)	IPP	4	A
Electrostatic Discharge	VESD	>8(Contact) >15(Air)	kv
Max.operating temperature	Tj	+125	°C

Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	VRWM	-			12	V
Reverse Breakdown Voltage	VBR	Iz=1mA Pin 3 to pin 4.	13.3	14	16.5	V
Reverse Leakage Current	IR@VR=12V	Pin 1,2,3 to Pin4			0.9	uA
Forward Voltage	VF	IF=15mA			1.0	V
Clamping Voltage	VC	I _{PP} =1A tp=8/20us I _{PP} =4A, tp=8/20us			18 25	V
Junction Capacitance	C I/O-I/O	Vdc=0V,f=1MHZ			0.3	pf
Junction Capacitance	C I/O-GND	Vdc=0V,f=1MHZ			0.8	pf

Rating and characteristic curve

FIGURE 1
Non-repetitive Peak pulse power V.S pulse time

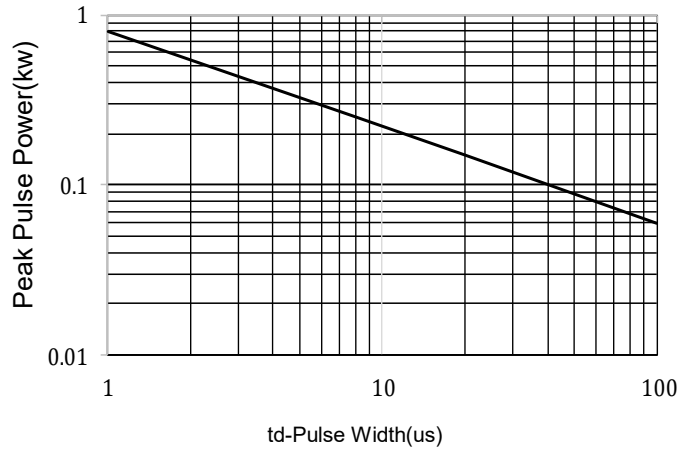


FIGURE 2
PULSE WAVE FORM

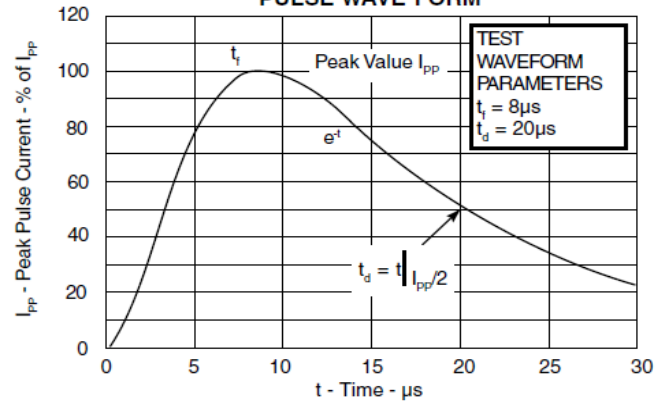
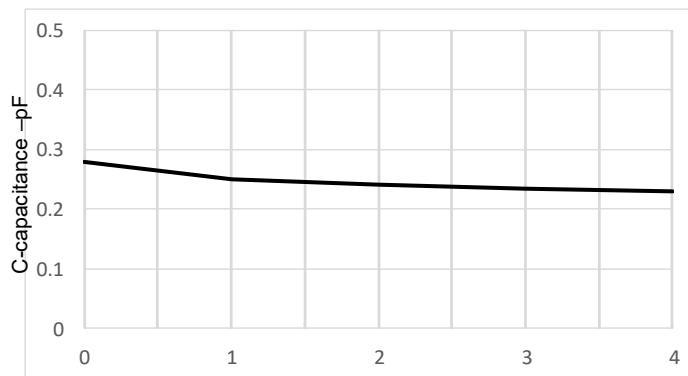


FIGURE3
Capacitance vs. Reverse voltage

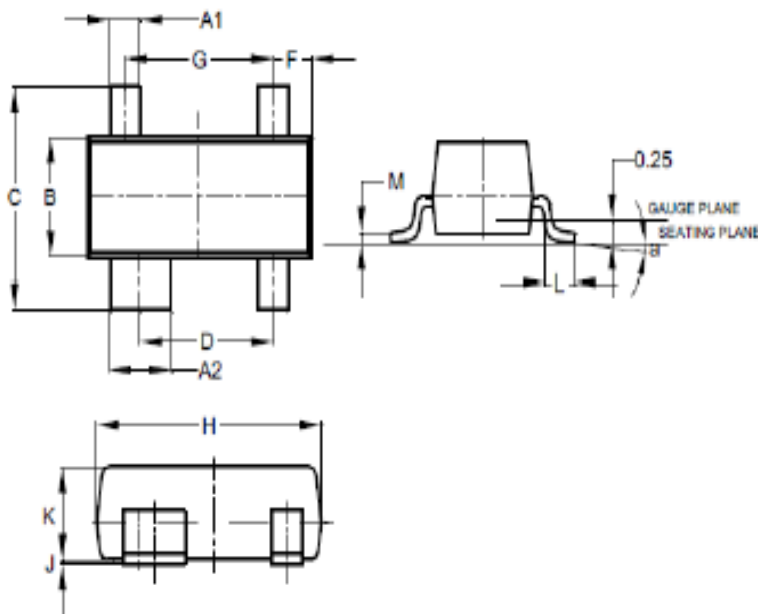


VR-Reverse voltage-Volts

Ordering information

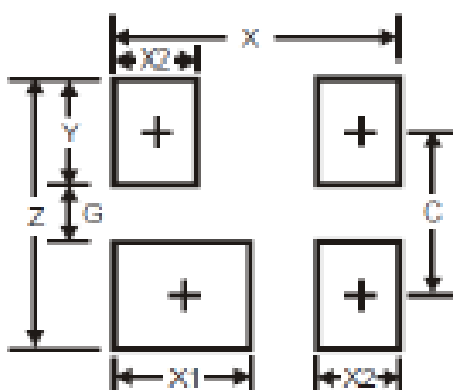
Marking code

Package information

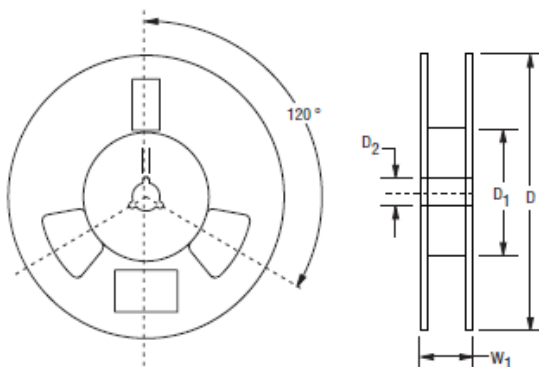
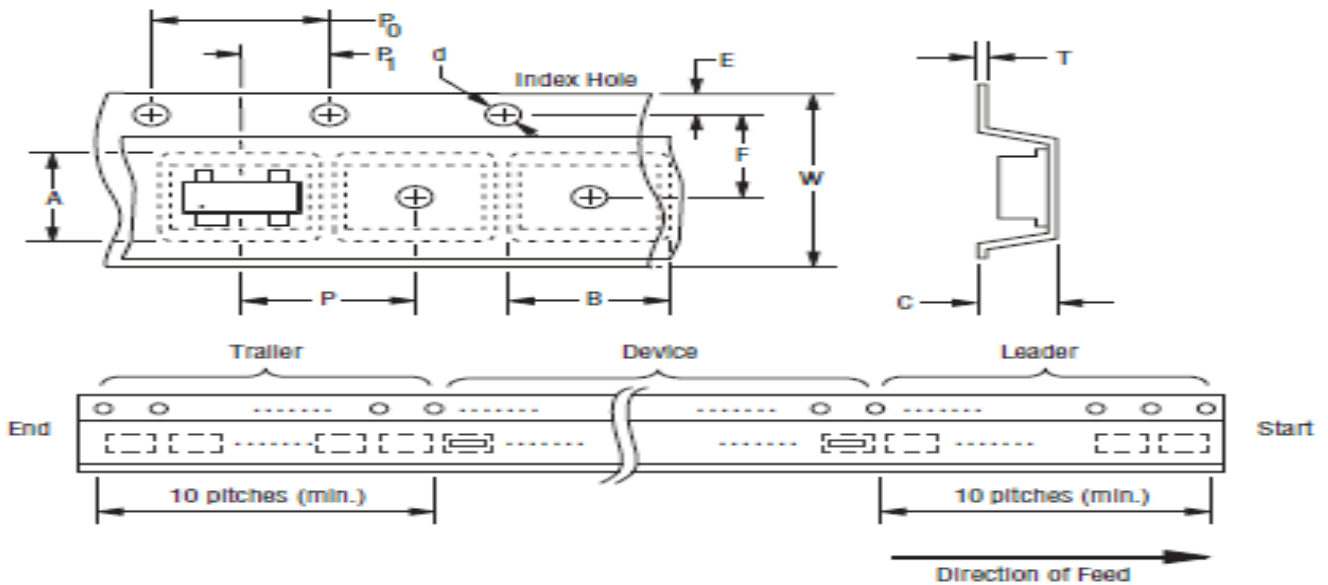


SOT143			
Dim	Min	Max	Typ
A1	0.37	0.51	0.400
A2	0.77	0.93	0.800
B	1.20	1.40	1.30
C	2.28	2.48	2.38
D	1.58	1.83	1.72
F	0.45	0.60	0.49
G	1.78	2.03	1.92
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.89	1.00	-
L	0.46	0.60	0.50
M	0.085	0.18	0.11
a	0°	8°	-
All Dimensions in mm			

Pad Layout



Dimensions	Value (in mm)
Z	2.70
G	1.30
X	2.50
X1	1.0
X2	0.60
Y	0.70
C	2.0

Tape & Reel Information


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Packing Base

7"reel = 3,000pcs

Item	Symbol	SOT-143
Carrier Width	A	$\frac{2.75 \pm 0.10}{(0.108 - 0.004)}$
Carrier Length	B	$\frac{3.30 \pm 0.10}{(0.130 - 0.004)}$
Carrier Depth	C	$\frac{1.25 \pm 0.10}{(0.049 - 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)}$ Min.
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 - 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.10}{(0.008 - 0.004)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$
Reel Width	W ₁	$\frac{14.4}{(0.567)}$ Max.
Quantity per Reel	—	3,000



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