

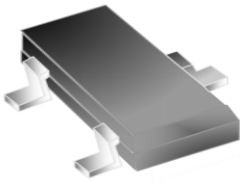
Features

- 400W Peak Pulse Power Per Line(8/20us)
- 12V/7V Working Peak Reverse Voltage
- Maximum Reverse Peak Pulse Current:12A
- ESD per IEC 61000-4-2(Contact):8KV
- ESD per IEC 61000-4-2(Air):15KV
- Clamping Voltage @IPP=5A:20V
- Protects two -7V~12V lines
- Package:SOT-23
- Polarity: Bidirectional

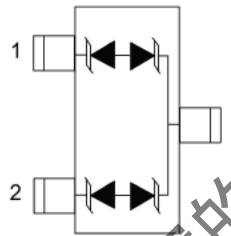
Mechanical Characteristics

- Mechanical Characteristics
- Lead Finish: NiPdAu
- Case Material: “ Green ” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

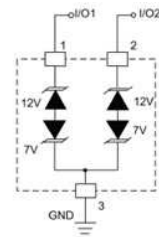
Schematic And Configuration



SOT-23



PIN Configuration



Circuit Diagram

Absolute Maximum Ratings (Ta=25 °C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating Temperature Range	Tj	-55to+125	
Storage Temperature Range	Tstg	-55to+150	

Electrical Characteristics (Ta=25 °C)

Parameter	Symbol	Conditions	Pins 1、Pin2 to Pin 3 (12V TVS)			Pins 3 to Pin 1、Pin2 (7V TVS)			Unit
			Min	Typ	Max	Min	Typ	Max	
Reverse stand-off voltage	VRWM				12			7	V
Reverse breakdown voltage	VBR	IT=1mA	13.3			7.5			V
Reverse leakage current	IR	VR = VRWM			1			1	μA
Clamping voltage	VC	IPP ^① = 5A, tP = 8/20μs		20	23		12	15	V
Clamping voltage	VC	IPP ^① = 12A, tP = 8/20μs		23	26		15	18	V
Junction capacitance	CJ	VR=0V, f = 1MHz			75			75	pF
		VR=VRWM, f = 1MHz		45			45		pF

Typical Performance Characteristics (Ta=25 , unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

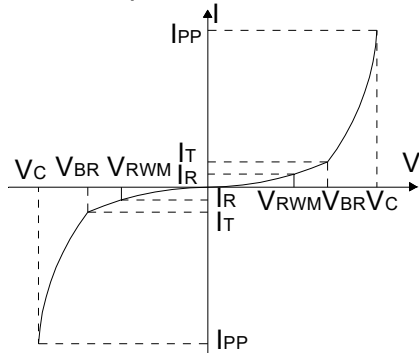


FIG.2: Pulse waveform (8/20μs)

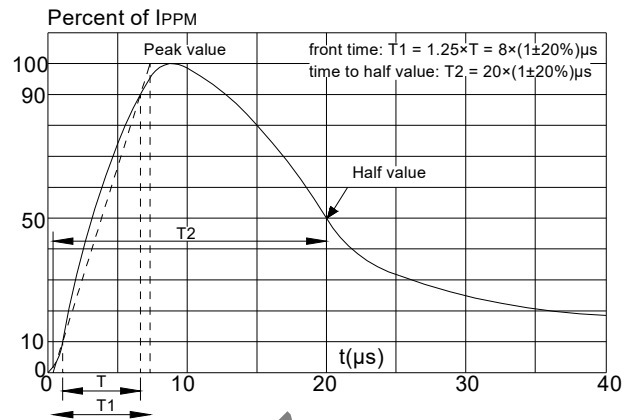


FIG.3: Pulse derating curve

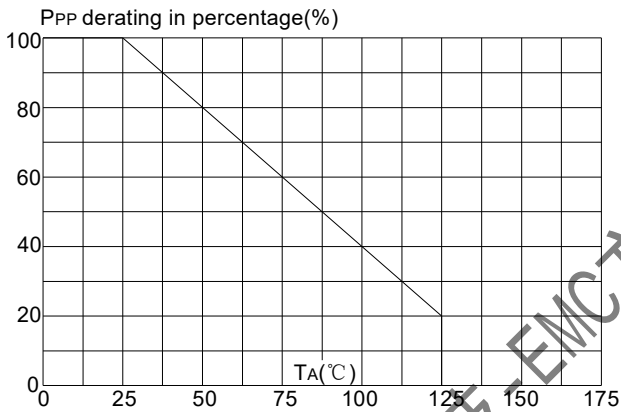
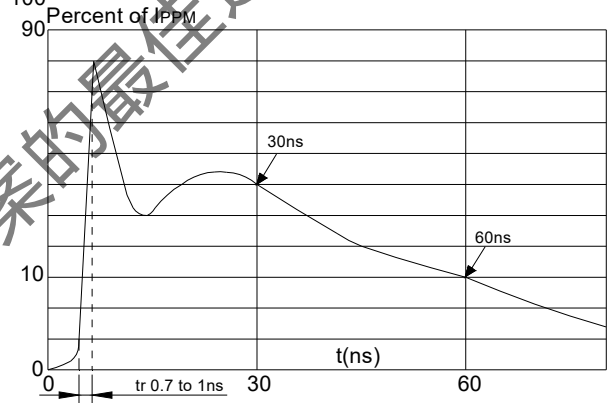


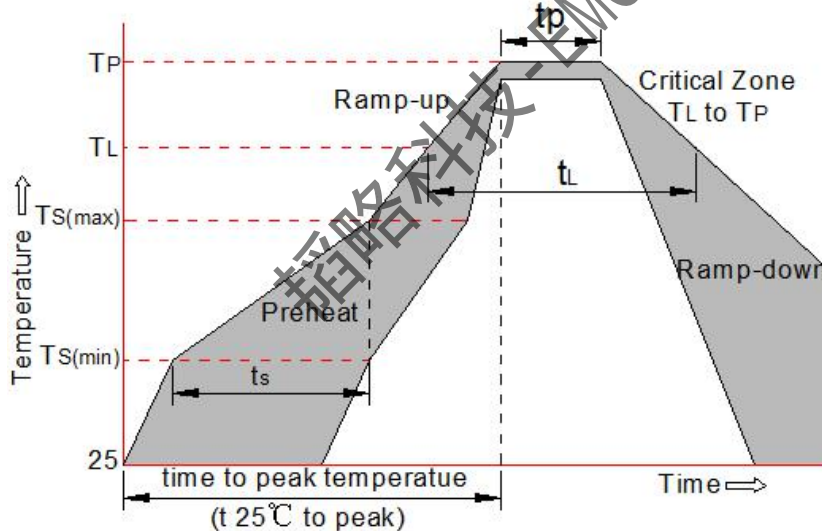
FIG.4: ESD clamping (8KV contact)



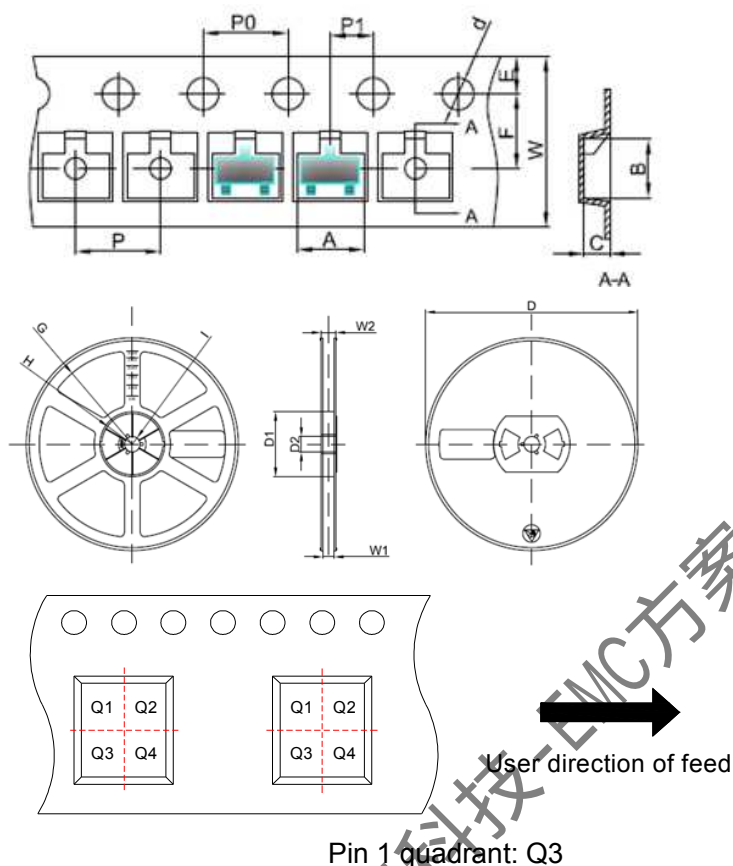
超略科技 EMC方案的最佳选择

Soldering Parameters

Reflow Condition		Pb-Free Assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Tape And Reel Specification-SOT-23

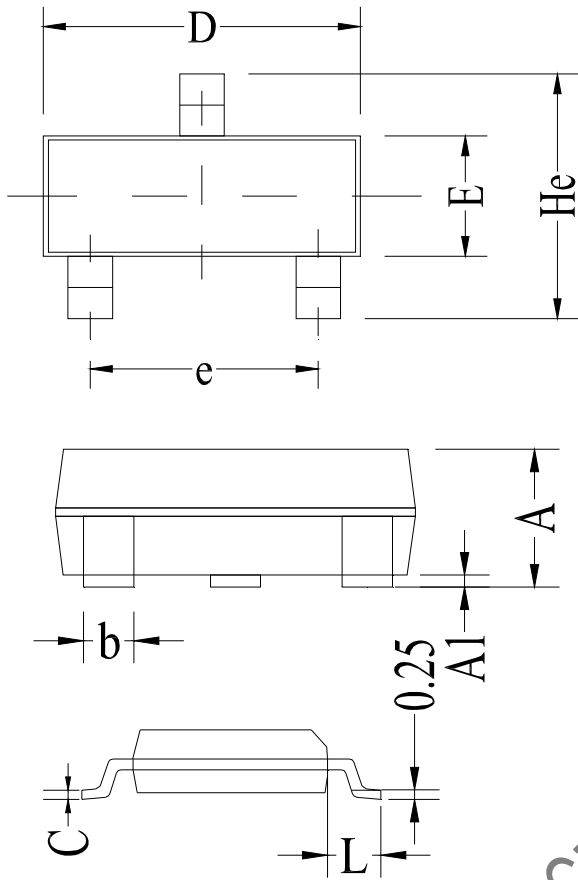


Symbol	Millimeter	Inches
	Typ.	Typ.
A	3.15	0.124
B	2.77	0.109
C	1.22	0.048
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

Packaging Description:

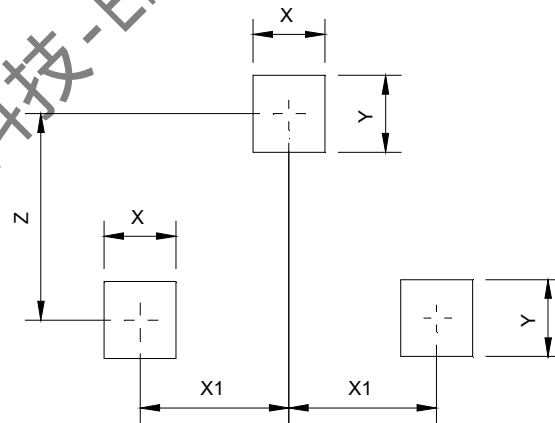
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Package Mechanical Data



SYM	DIMENSIONS					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.035	-	0.045	0.9	-	1.15
A1	0.000	-	0.004	0.00	-	0.10
b	0.01	-	0.013	0.25	-	0.325
C	0.009	-	0.01	0.22	-	0.25
D	0.11	-	0.118	2.8	-	3.0
e	0.071	-	0.075	1.8	-	1.9
E	0.047	-	0.055	1.2	-	1.4
L	0.012	-	0.02	0.30	-	0.50
He	.089	-	0.1	2.25	-	2.55
X	0.0315			0.8		
X1	0.037			0.95		
Y	0.0315			0.80		
Z	0.0795			2.02		

韬略科技-EMC方案的最佳选择



Land Pattern

Contact Information

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