

Features

- Low Clamping Voltage
- Halogen Free
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

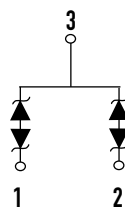
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
SM05BL	FW5

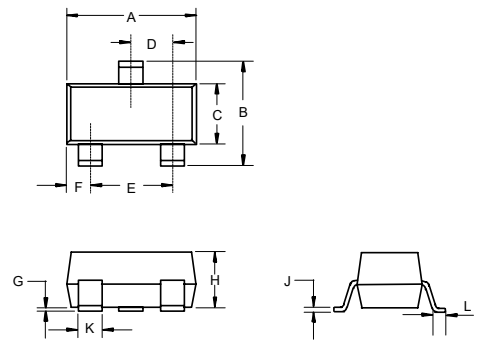
IEC61000-4-2(ESD)	Air Contact	±30KV ±30KV
IEC61000-4-4(EFT)(5/50ns)		40A
Peak Pulse Current(8/20µs)	I _{PP}	9A
Peak Pulse Power (8/20µs)	P _{PK}	120W

Internal Structure



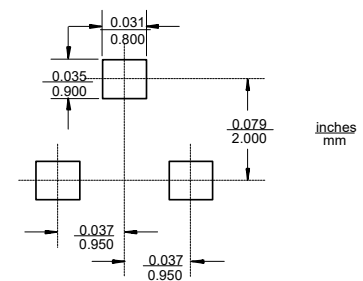
ESD Protection Device

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$, I/O to GND	6.1		9	V
Reverse Leakage Current	I_R	$V_{RWM}=5V$, I/O to GND			0.9	μA
Clamping Voltage	V_C	$I_{PP}=9A$, $t_p=8/20\mu s$, I/O to GND			15	V
Junction Capacitance	C_J	$V_R=0V$, $f=1MHz$, I/O to GND		13	16	pF
Junction Capacitance	C_J	$V_R=0V$, $f=1MHz$, I/O to I/O		3.5	5	pF

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

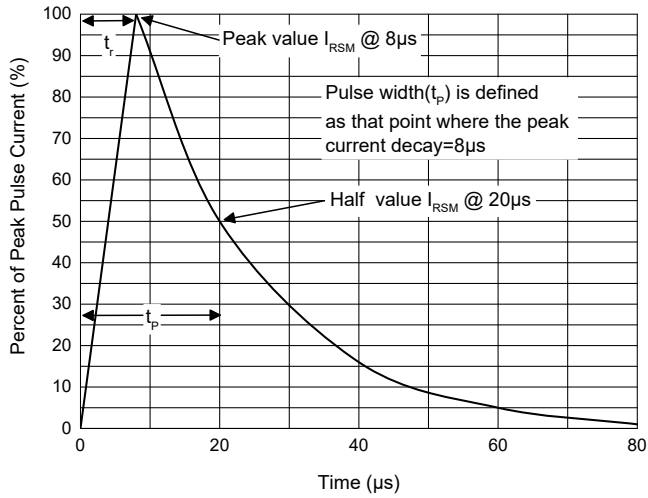


Fig. 2 - Non-Repetitive Peak Pulse Power

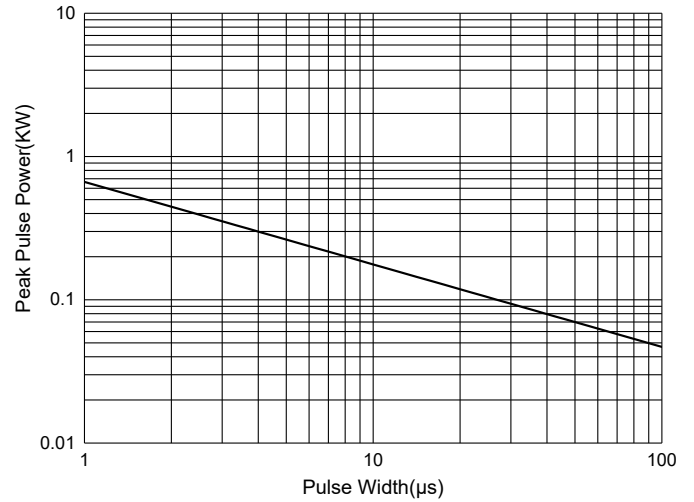


Fig. 3 - Capacitance Characteristics

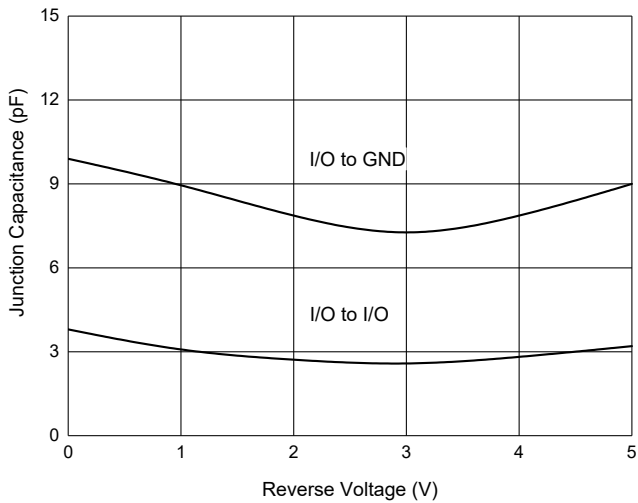


Fig. 4 - Clamping Voltage Characteristics

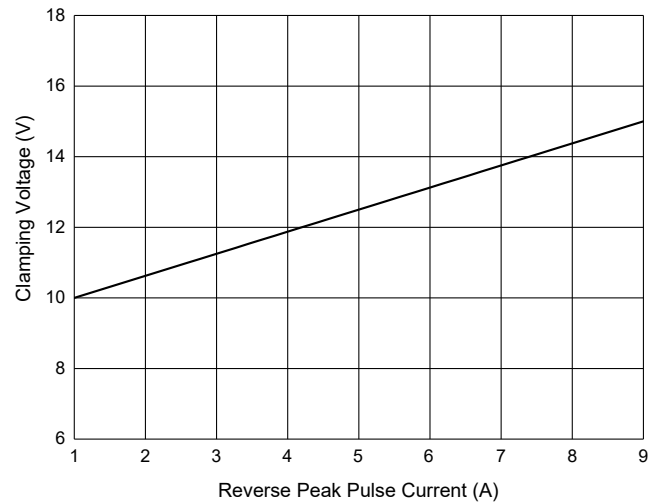
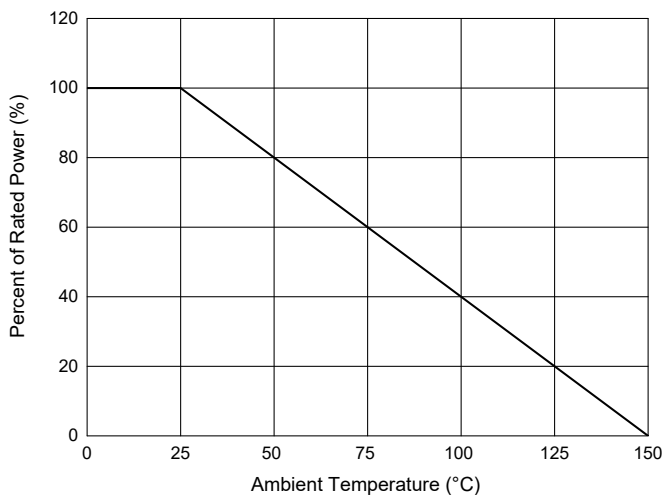


Fig. 5 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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