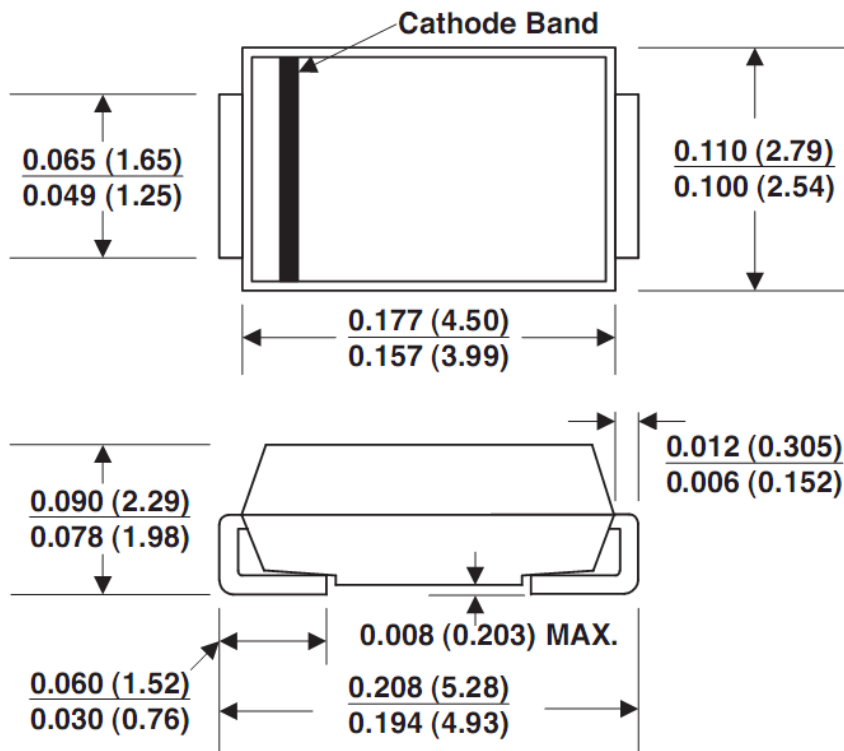


SMA/DO-214AC



Features

- ✧ For surface mounted application in order to optimize board space
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Glass passivated junction
- ✧ Excellent clamping capability
- ✧ Fast response time: Typically less than 1.0ps from 0 volt to BV min
- ✧ Typical I_R less than 1uA above 10V
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds at terminals
- ✧ Plastic material used carried Underwriters Laboratory Flammability Classification 94V-0
- ✧ 400 watts peak pulse power capability with a 10 / 1000 us waveform
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

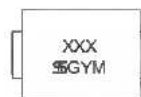


Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA Std RS-481
- ✧ Weight: 0.064 gram

Dimensions in inches and (millimeters)

Marking Diagram



- XXX = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Type Number	Symbol	Value	Unit
Peak Power Dissipation at $T_A=25^\circ\text{C}$, $T_p=1\text{ms}$ (Note 1)	P_{PK}	400	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Note 2)	I_{FSM}	40	Amps
Maximum Instantaneous Forward Voltage at 25.0A for Unidirectional Only	V_F	3.5	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Note 1: Non-repetitive Current Pulse Per Fig. 3 and Derated above $T_A=25^\circ\text{C}$ Per Fig. 2

Note 2: Mounted on 5 x 5mm Copper Pads to Each Terminal

RATINGS AND CHARACTERISTIC CURVES (P4SMA HV SERIES)

FIG. 1 PEAK PULSE POWER RATING CURVE

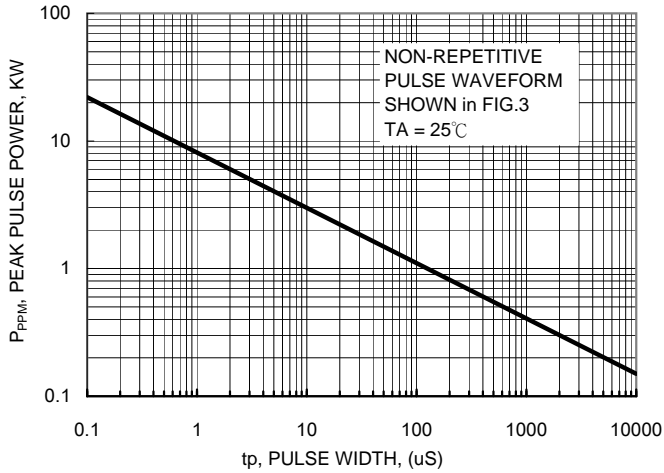


FIG.2 PULSE DERATING CURVE

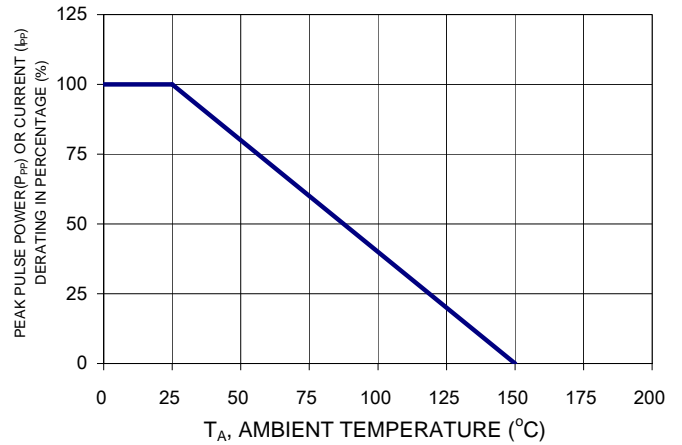


FIG. 3 CLAMPING POWER PULSE WAVEFORM

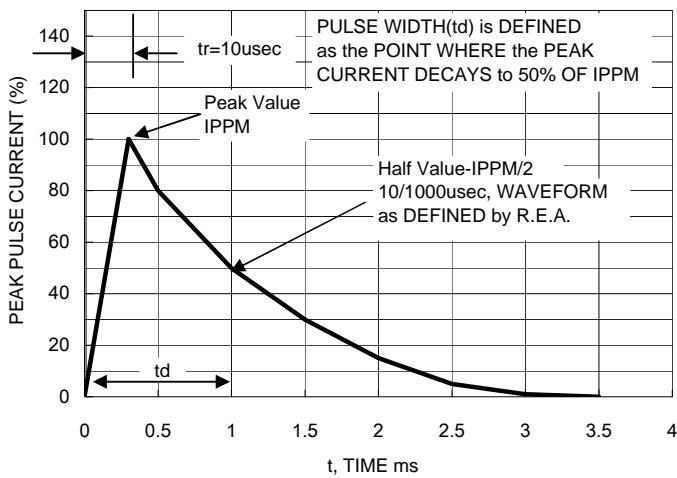


FIG. 4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

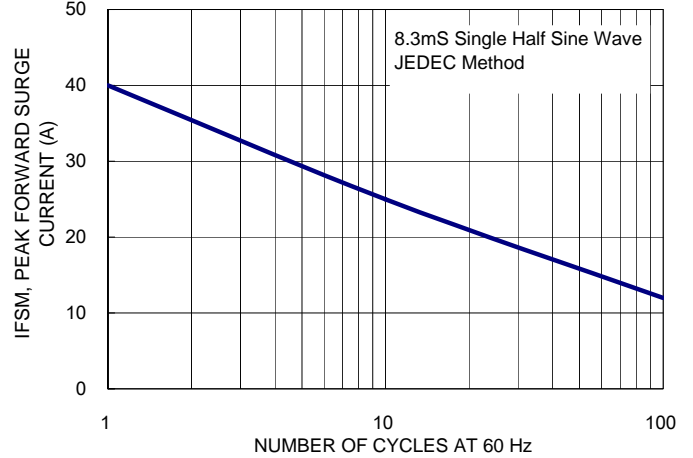
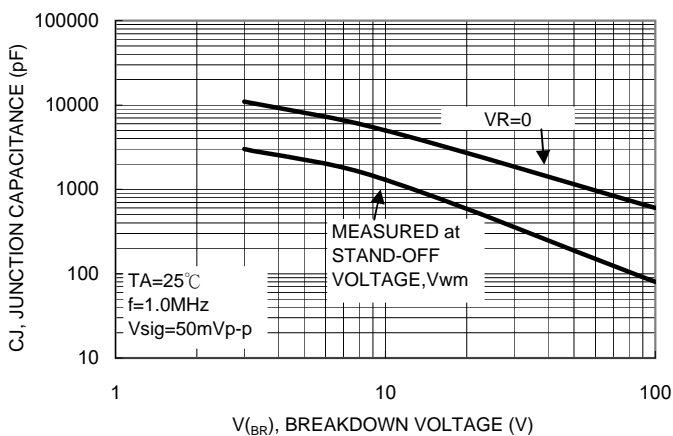


FIG. 5 TYPICAL JUNCTION CAPACITANCE



ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Device	Device Marking Code	Breakdown Voltage VBR (V) (Note 1)		Test Current IT (mA)	Stand-Off Voltage V _{WM} (V)	Maximum Reverse Leakage @ V _{WM} ID (uA)	Maximum Peak Pulse Current IPPM (A) (Note 2)	Maximum Clamping Voltage @ IPPM Vc(V)	Maximum Temperature Coefficient of VBR(%/°C)
		Min	Max						
P4SMA220A	SEJ	209	231	1	185	1	1.3	328	0.108
P4SMA250A	SGJ	237	263	1	214	1	1.2	344	0.108
P4SMA300A	SKJ	285	315	1	256	1	1.0	414	0.108
P4SMA350A	SMJ	332	368	1	300	1	0.9	482	0.108
P4SMA400A	SPJ	380	420	1	342	1	0.8	548	0.108

Notes:

1. V_{BR} measure after I_T applied for 300us, I_T=square wave pulse or equivalent.
2. Surge current waveform per Figure. 3 and derate per Figure. 2.
3. All terms and symbols are consistent with ANSI/IEEE C62.35.