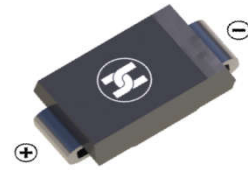
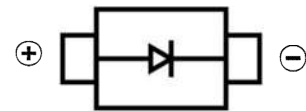


SCHOTTKY POWER RECTIFIER
FEATURES

- Highly stable oxide passivated junction
- Very low forward voltage drop


SMA

MECHANICAL DATA

- Case: SMA(DO-214AC)
- Case material: Molded plastic. UL flammability
- Classification rating: 94V-0
- Weight: 0.065 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V _{RRM}	40	V
Working peak reverse voltage	V _{RWM}		
DC blocking voltage	V _R		
Average rectified forward current (at rated V _R , T _L = 100°C)	I _O	3.0	A
Non-repetitive peak surge current (surge applied at rated load conditions half-wave, single phase, 60Hz)	I _{FSM}	100	
Storage/operating case temperature	T _{stg} , T _C	-55 ~ +150	°C
Operating junction temperature (note 1)	T _J	-55 ~ +150	°C
Voltage rate of change (rated V _R , T _J = 25°C)	dv/dt	10000	V/μs
Thermal resistance from junction to lead (note 2)	R _{θJL}	15	°C/W
Thermal resistance from junction to ambient (note 2)	R _{θJA}	81	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Max.	Unit	Conditions
Instantaneous Forward Voltage (Note 3)	V _F	0.45	V	I _F =3.0A, T _J =25°C
		0.39	V	I _F =3.0A, T _J =100°C
Instantaneous Reverse Current	I _R	0.3	mA	V _R =40V, T _J =25°C
		15		V _R =40V, T _J =100°C

Note: 1. The heat generated must be less than the thermal conductivity from junction-to-ambient: $dP_D/dT_J < 1/R_{\theta JA}$.

2. Mounted on 2" Square PC Board with 1 inch² total pad size, PC board FR4.

3. Pulse Test: pulse width ≤ 250μs, duty cycle ≤ 2%.

SCHOTTKY POWER RECTIFIER

Typical Characteristics

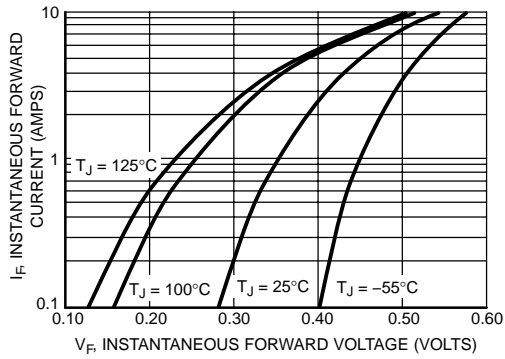


Figure 1. Typical Forward Voltage

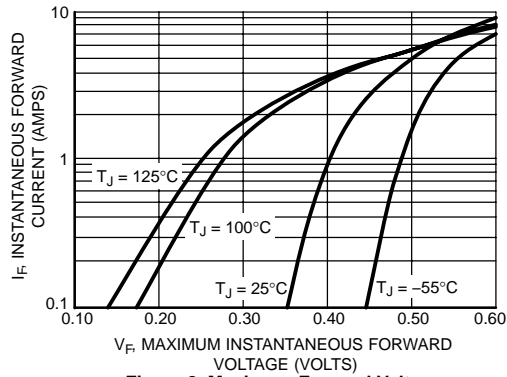


Figure 2. Maximum Forward Voltage

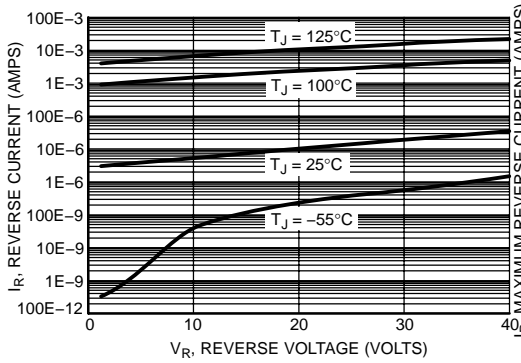


Figure 3. Typical Reverse Current

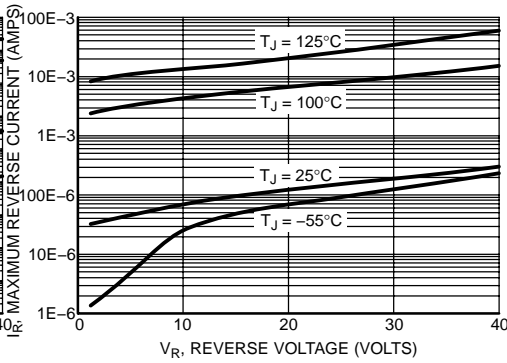


Figure 4. Maximum Reverse Current

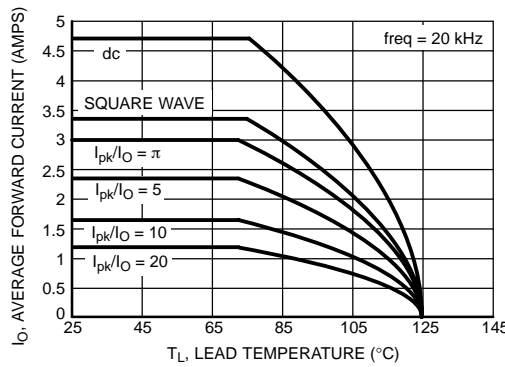


Figure 5. Current Derating

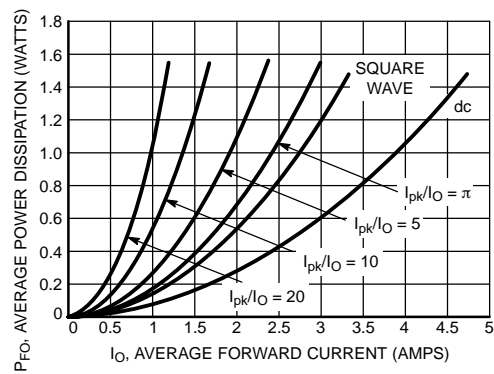


Figure 6. Forward Power Dissipation

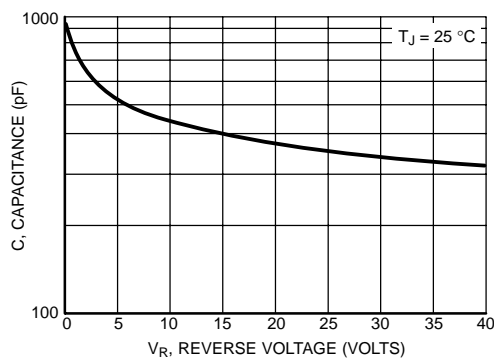


Figure 7. Capacitance

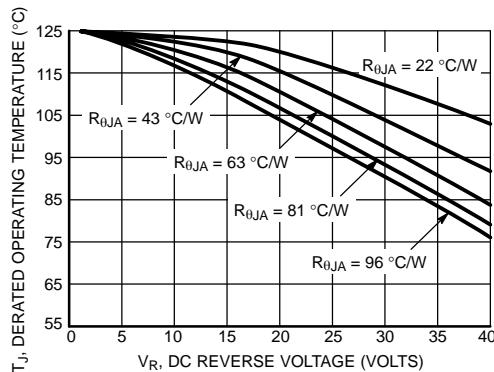


Figure 8. Typical Operating Temperature Derating

SCHOTTKY POWER RECTIFIER

Typical Characteristics (Continued)

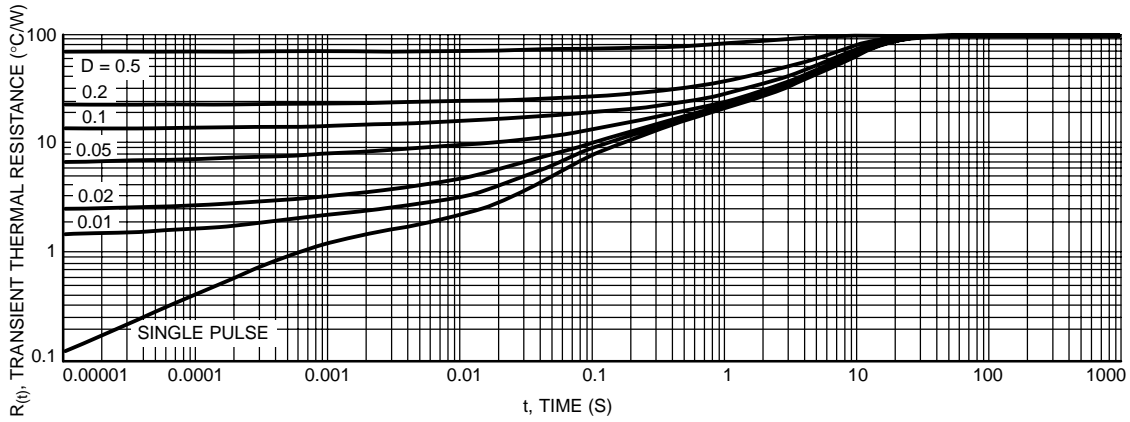


Figure 9. Thermal Response, Junction-to-Ambient (min pad)

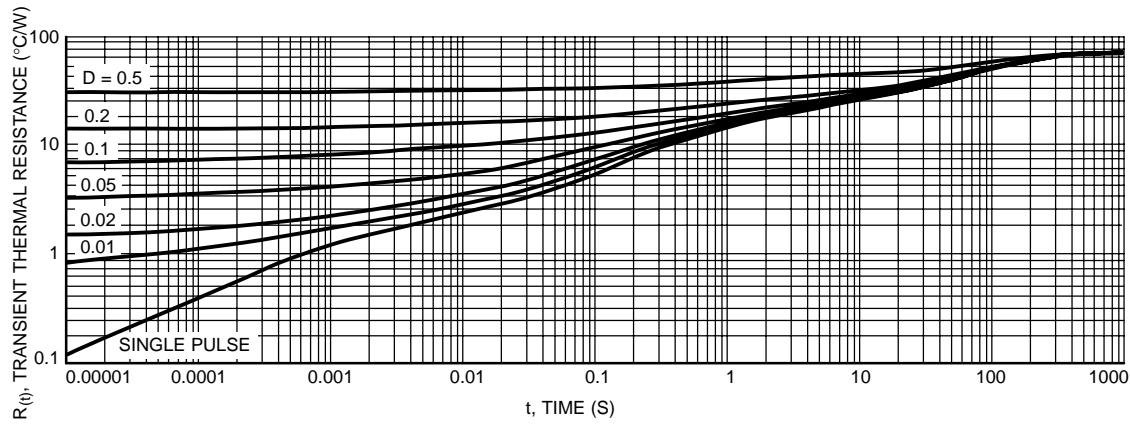
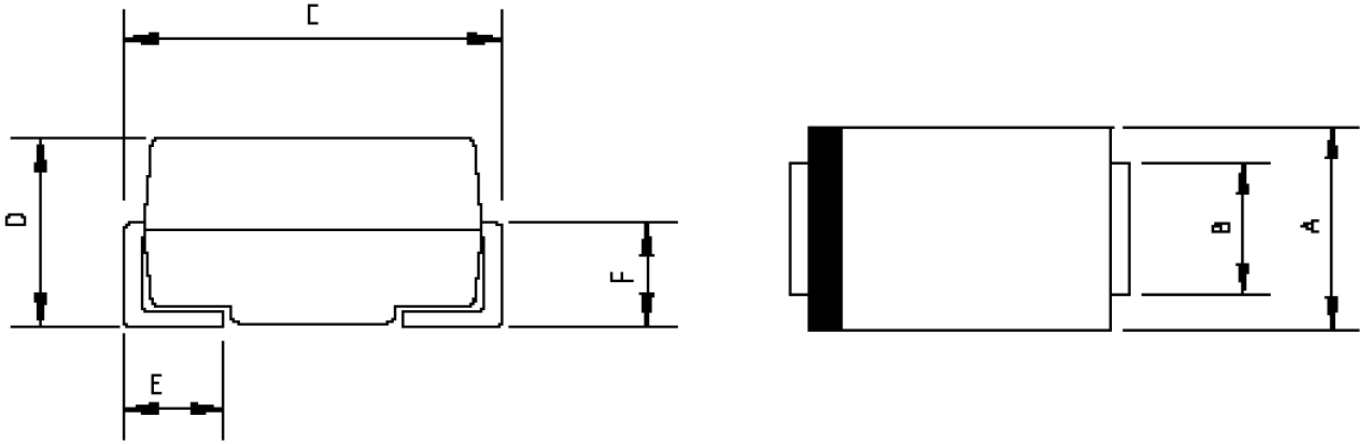


Figure 10. Thermal Response, Junction to Ambient (1 inch pad)

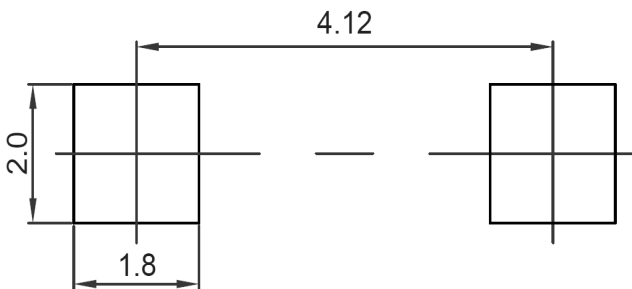
SCHOTTKY POWER RECTIFIER

SMA Package Outline Dimensions



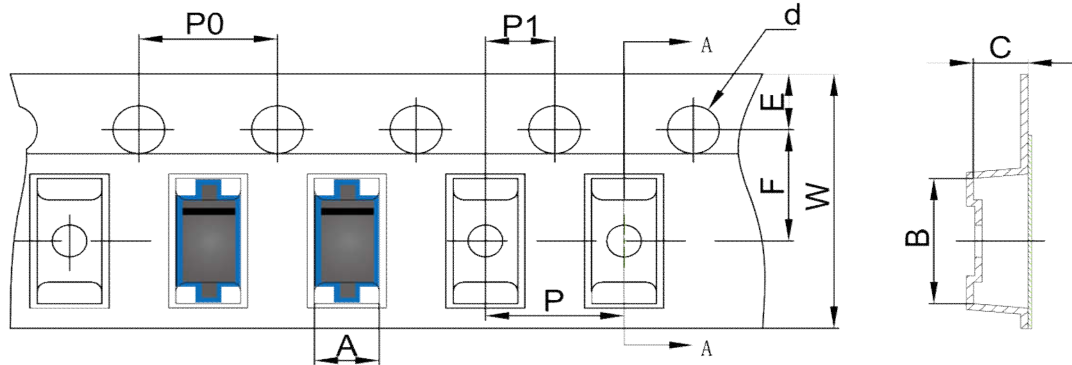
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.80	0.086	0.110
B	1.30	1.70	0.051	0.067
C	4.70	5.30	0.185	0.209
D	1.70	2.55	0.067	0.100
E	0.90	1.50	0.035	0.059
F	0.90	1.50	0.035	0.059

SMA Suggested Pad Layout

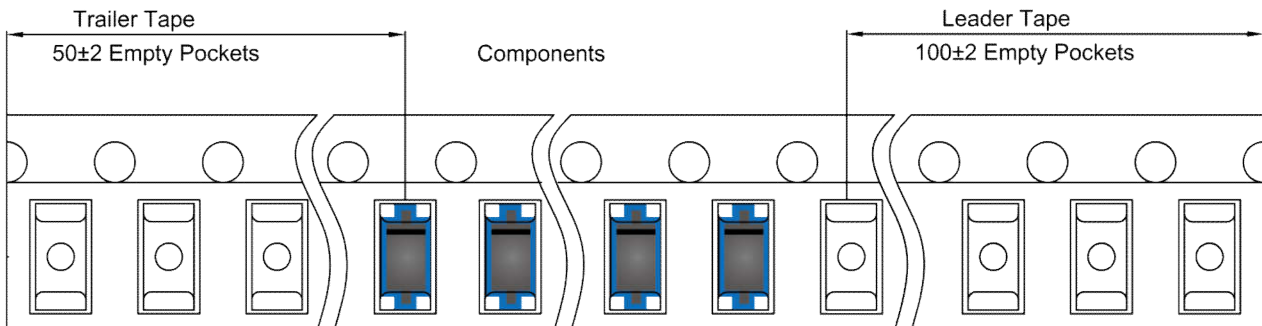
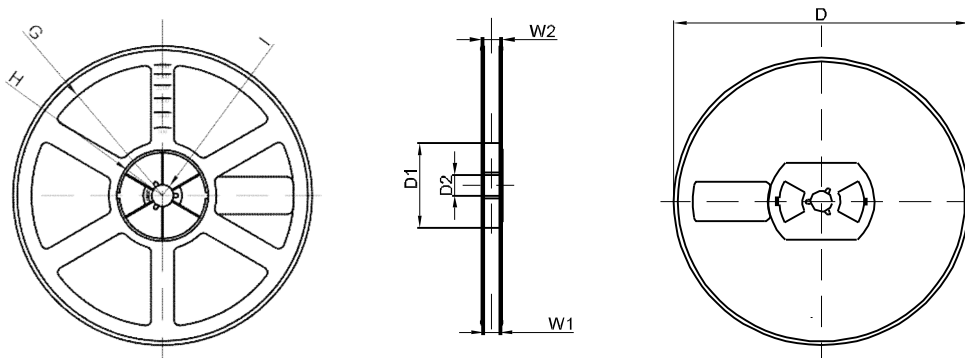


Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY POWER RECTIFIER
SMA Tape and Reel
SMA Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMA	2.89	5.35	2.68	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMA Tape Leader and Trailer

SMA Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1