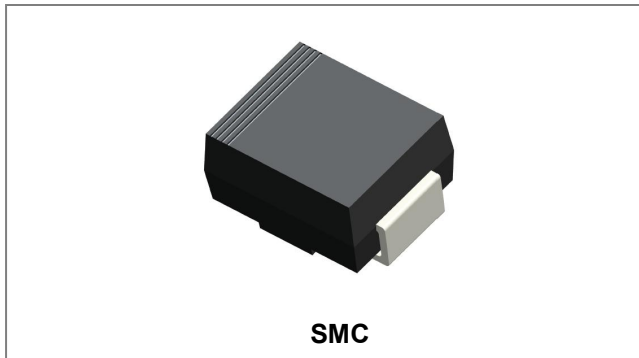


30BQ150 SCHOTTKY RECTIFIER



Features

- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Terminals finish: Tin Lead-free plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Disk Drives
- Switching power supply
- Redundant power subsystems
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery Charging

Maximum Ratings@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	150	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _C = 148°C, rectangular wave form	3.0	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	55	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 3 A, Pulse, T _J = 25 °C	0.79	0.86	V
	V _{F2}	@ 3 A, Pulse, T _J = 125 °C	0.65	0.70	V
Reverse Current*	I _{R1}	@V _R = Rated V _R , Pulse, T _J = 25 °C	0.003	1	mA
	I _{R2}	@V _R = Rated V _R , Pulse, T _J = 125 °C	0.2	3	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	70	110	pF
Series Inductance	L _S	Measured lead to lead 5 mm from package body	3.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{\theta\text{JL}}$	-	12	$^{\circ}\text{C/W}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JA}}$	DC operation	46	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.21	g
Case Style	SMC			

Ratings and Characteristics Curves

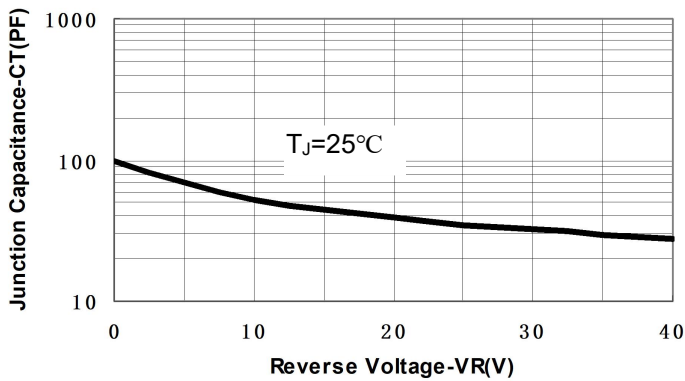


Fig.1-Typical Junction Capacitance

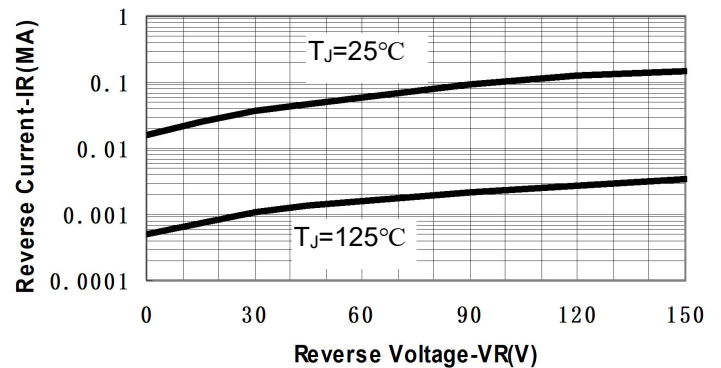


Fig.2-Typical Reverse Characteristics

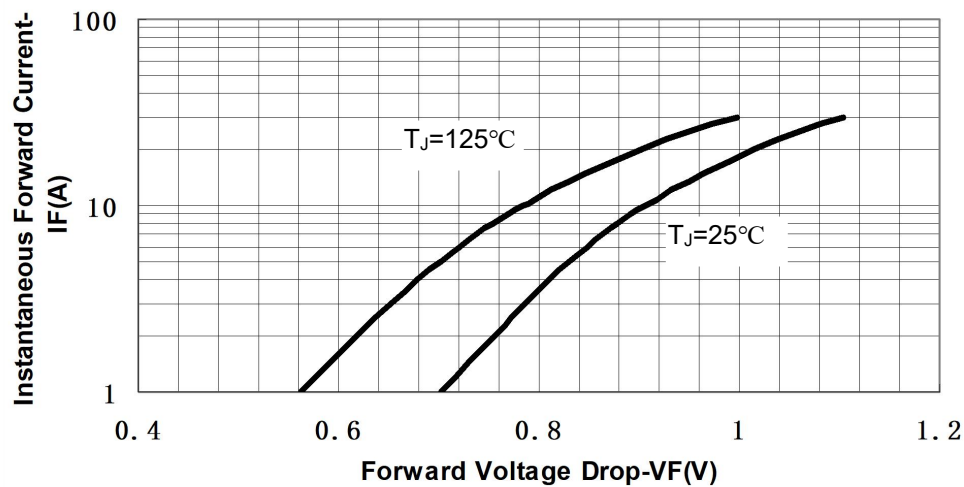
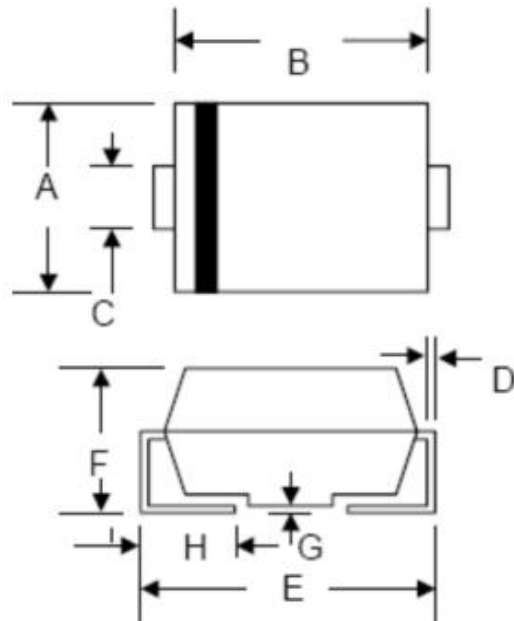


Fig.3-Typical Instantaneous Forward Voltage Characteristics

Mechanical Dimensions SMC



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.25	0.305	0.325
F	2.00	2.95	0.079	0.116
G	0.051	0.203	0.002	0.008
H	0.76	1.60	0.030	0.063


Ordering Information

Device	Package	Shipping
30BQ150	SMC (Pb-Free)	3000pcs / reel
30BQ150TR	SMC (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

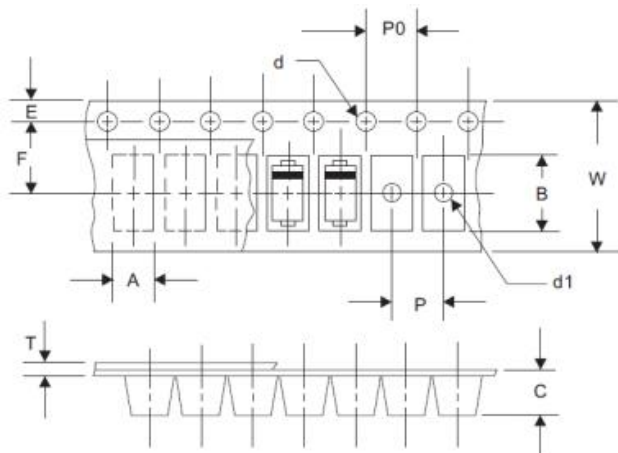
Where XXXXX is YYWWL



SC3M = Part Name
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification SMC



SYMBOL	Millimeters	
	Min.	Max.
A	5.95	6.15
B	8.10	8.30
C	2.60	2.80
d	1.40	1.60
E	1.65	1.85
F	7.40	7.60
P	7.90	8.10
P0	3.90	4.10
T	0.20	0.40
W	15.70	16.30

Technical Data
Data Sheet N0677, Rev. A



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