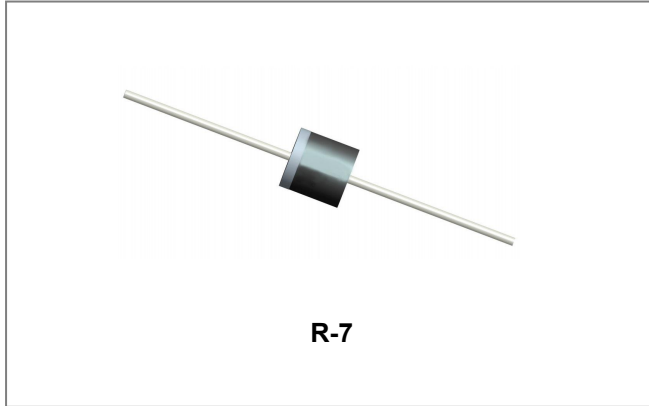


30SQ045-D/30SQ045-C SCHOTTKY BARRIER RECTIFIER



Features

- 200°C T_J operation
- Super-high speed & low noise switching
- Low voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Planar Schottky technology
- 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

- DC-DC converters
- AC adapter
- High frequency rectification circuit
- Bypass diodes

Maximum Ratings (limiting values, at 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	-	45	V
Average Rectified Forward Current	I _{F(AV)}	T _C = 120°C, In DC	30	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	350	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Peak Forward Voltage*	V _{FM}	I _{FM} = 30.0A, T _a = 25°C	0.51	0.55	V
Peak Reverse Current*	I _{RRM1}	V _{RM} = V _{RRM}	T _a = 25°C	0.05	mA
	I _{RRM2}		T _a = 100°C	-	
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	1495	-	pF
Thermal Resistance	R _{θJ-c}	Between junction and case	1.8	-	°C/W

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature IN DC Forward Mode, without reverse bias, $t \leq 1$ h	T_J	-	-55 to +200	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Approximate Weight	wt	30SQ045-D 30SQ045-C	2.6 3	g
Case Style		R-7		

Ratings and Characteristics Curves

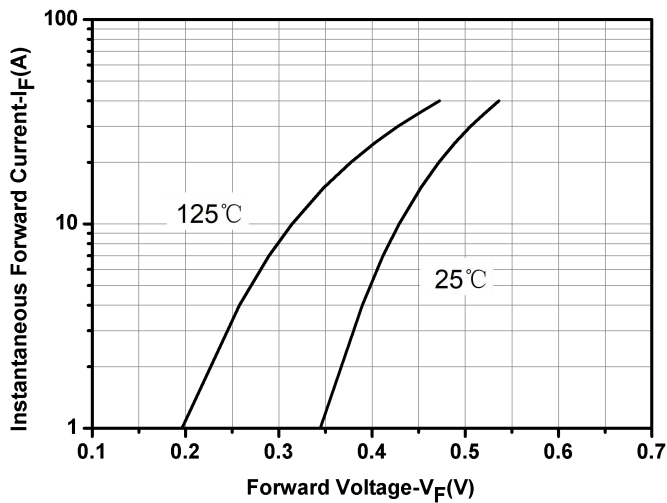


Fig.1-Typical Forward Voltage Characteristics

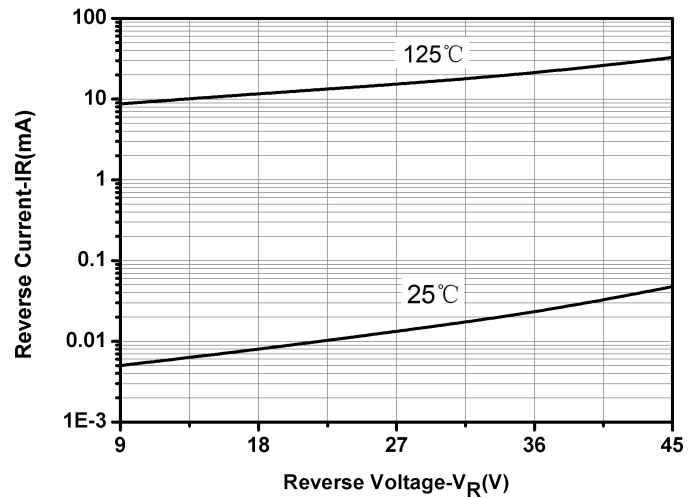


Fig.2-Typical Reverse Characteristics

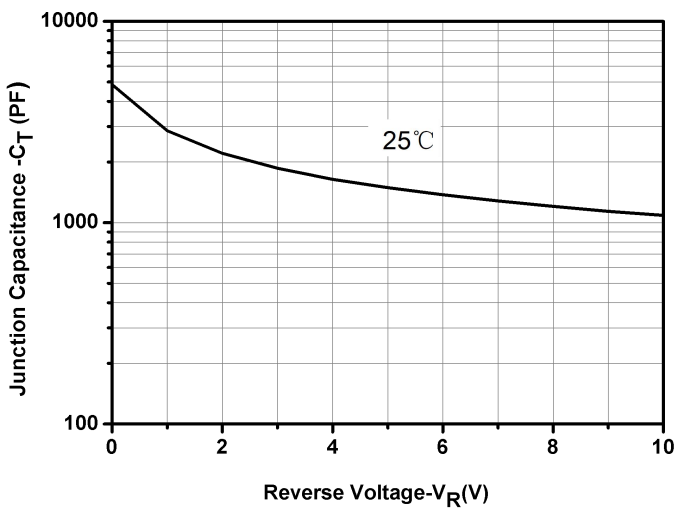
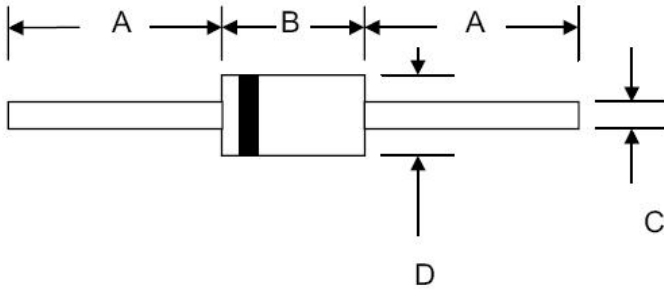


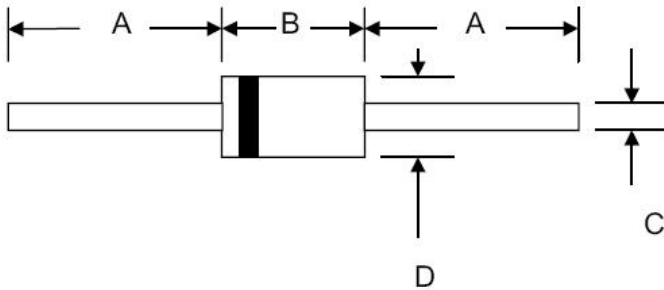
Fig.3-Capacitance vs. Reverse Voltage

Mechanical Dimensions R-7(30SQ045-D)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	15.00	-	0.590	-
B	8.60	9.10	0.340	0.360
C	1.90	2.10	0.075	0.083
D	8.60	9.10	0.340	0.360

Mechanical Dimensions R-7(30SQ045-C)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	24.5	-	0.965	-
B	8.60	9.10	0.340	0.360
C	1.90	2.10	0.075	0.083
D	8.60	9.10	0.340	0.360

Ordering Information

Device	Package	Shipping
30SQ045-D	R-7(Pb-Free)	800pcs / reel
30SQ045-C	R-7(Pb-Free)	800pcs / reel
30SQ045-DTR	R-7(Pb-Free)	800pcs / reel

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

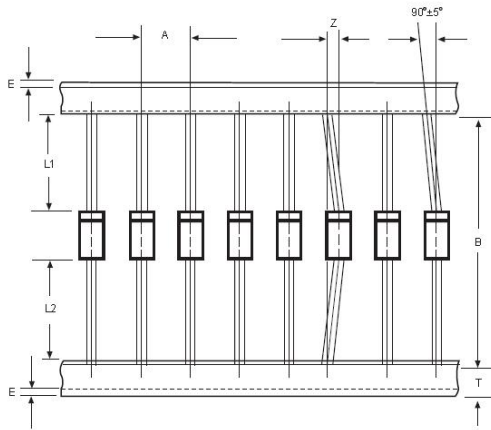
Marking Diagram



Where XXXXX is YYWWL

30 = Forward Current (30A)
 S = Package Type
 Q = Device Type
 04 = Reverse Voltage (45V)
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

Carrier Tape Specification R-7



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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