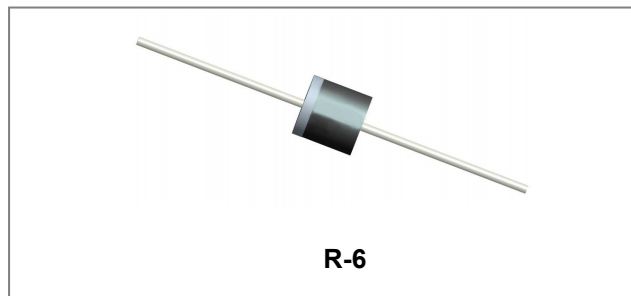


30SQ045-1 SCHOTTKY BARRIER RECTIFIER



Features

- Super-high speed & low noise switching
- Low voltage drop
- 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	$I_F (AV)$	$T_C = 96^\circ\text{C}$, 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}	$I_{FM} = 30.0\text{A}$, $T_a = 25^\circ\text{C}$	0.50	0.60	V
Peak Reverse Current*	I_{RRM1}	$V_{RM} = V_{RRM}$	0.10	0.5	mA
	I_{RRM2}		-	50	
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	2270	-	pF
Thermal Resistance	$R_{\theta J-C}$	Between junction and case	3.0	-	$^\circ\text{C/W}$
	$R_{\theta J-L}$	Between junction and lead	2.0	-	

* 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	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Approximate Weight	wt	-	1.9	g
Case Style	R-6			

Ratings and Characteristics Curves

Figure1 Typical Forward Characteristics

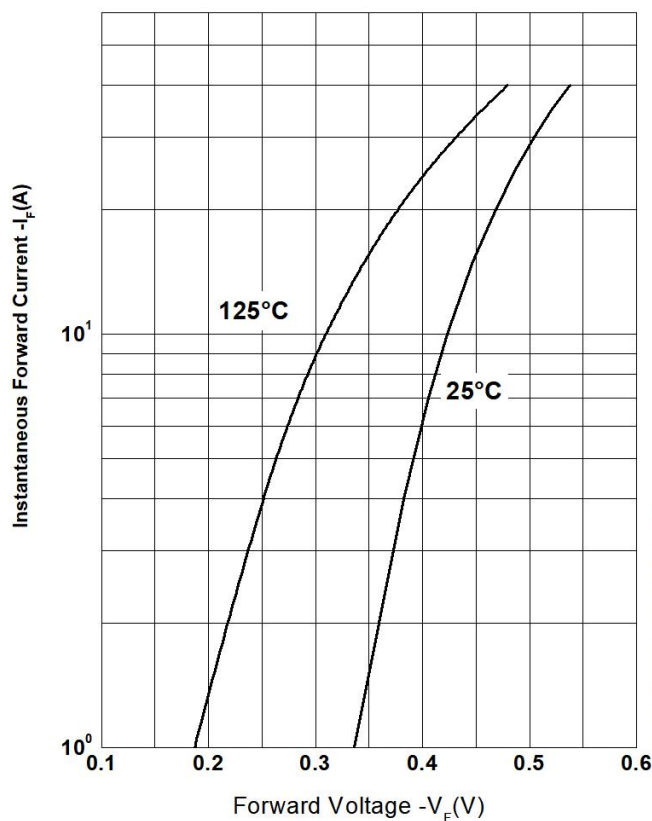


Figure 2 Typical Reverse Characteristics

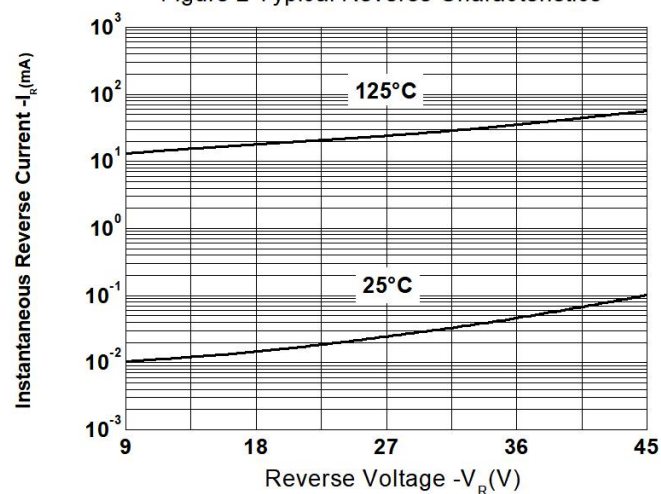
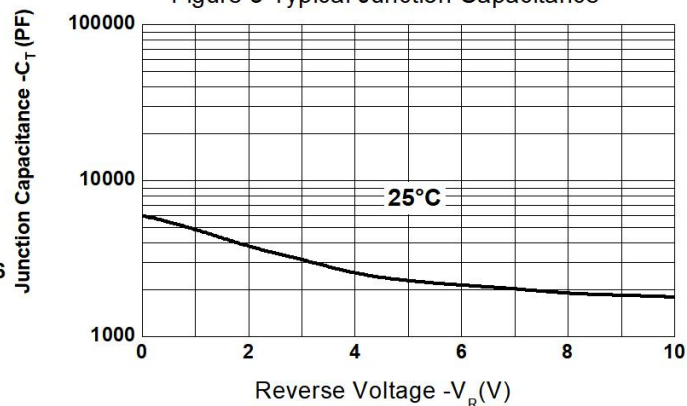
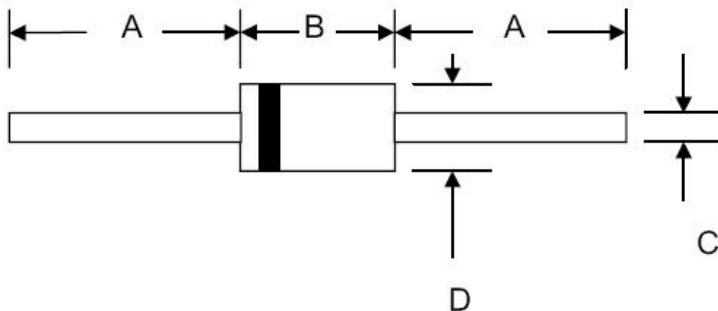


Figure 3 Typical Junction Capacitance



Mechanical Dimensions R-6



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	24.5	-	0.965	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

Ordering Information

Device	Package	Shipping
30SQ045-1	R-6(Pb-Free)	500pcs / reel
30SQ045-1TR	R-6(Pb-Free)	500pcs / reel

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

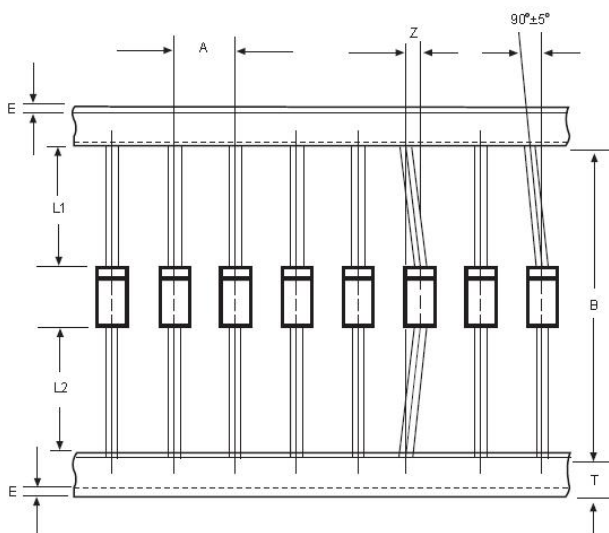
Marking Diagram



Where XXXXX is YYWWL

30 = Forward Current (30A)
 S = Package Type
 Q = Device Type
 045-1 = Reverse Voltage (45V)
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

Carrier Tape Specification R-6



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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