

Pb Free Plating Product

30SQ045



30.0 Ampere,45Volt PhotoVoltaic Bypass Schottky Barrier Rectifier Diode

<p>Features</p> <ul style="list-style-type: none"> ※ ThinkiSemi latest&matured process Schottky ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability <p>Application</p> <ul style="list-style-type: none"> ※ Automotive Inverters and Solar Inverters ※ Car Audio Amplifiers and Sound Device Systems ※ Plating Power Supply, Motor Control, UPS and SMPS etc. ※ Solar Junction Box Application <p>Mechanical Data</p> <ul style="list-style-type: none"> ※ Case:R-6/P-600 package outline ※ Epoxy: UL 94V-0 rate flame retardant ※ Terminals: Solderable per MIL-STD-202 method 208 ※ Polarity: As marked on diode body ※ Mounting position: Any ※ Weight: 2.0 gram approximately 	<p>R-6/P-600 Unit:inch(mm)</p> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>
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■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	30SQ045
Device Marking Code			30SQ045
Repetitive Peak Reverse Voltage	VRRM	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	380
Current Squared Time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	599
Storage Temperature	T _{stg}	°C	-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations, without reverse bias, t ≤1 h (Fig. 1)①	T _j	°C	-55 ~+200

NOTE

① Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	30SQ045
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =30.0A	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.5
	I _{RRM2}		V _{RM} =V _{RRM} T _a =100°C	50

■Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	30SQ045
Thermal Resistance Between junction and case	R _{θJ-C}	°C/W	2.5

■ Characteristics (Typical)

