

**Pb Free Plating Product**

## 30SQ045



30.0 Ampere, 45 Volt Photo Voltaic Bypass Schottky Barrier Rectifier Diode

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

### Maximum Ratings (Ta=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, Ta=25°C	IO	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, Ta=25°C	IFSM	A	380
Current Squared Time @1ms≤t≤8.3ms Tj=25°C	I <sup>2</sup> t	A <sup>2</sup> s	599
Storage Temperature	Tstg	°C	-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations. without reverse bias, t ≤1 h (Fig. 1)①	Tj	°C	-55 ~+200

### NOTE

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

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	30SQ045
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=30.0A	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =V <sub>RRM</sub> Ta=25°C	0.5
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> Ta=100°C	50

### Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	30SQ045
Thermal Resistance Between junction and case	RθJ-C	°C/W	2.5

■ Characteristics (Typical)

