

General Rectifier Diodes



Features

- High surge Forward current capability
- High efficiency
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** R-7
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	15SQ045
Device marking code			15SQ045
Repetitive Peak Reverse Voltage	V _{RRM}	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	15
Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	325
Current Squared Time @ 1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	427
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	15SQ045
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =15.0A	0.5
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	uA	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) R_{θJ-C}

PARAMETER	SYMBOL	UNIT	15SQ045
Thermal Resistance Between junction and case	R _{θJ-C}	°C/W	2.2

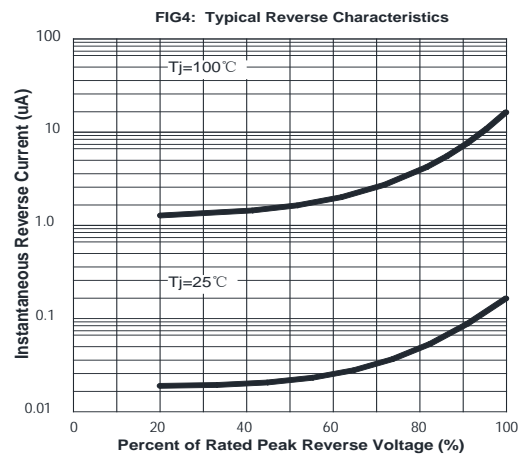
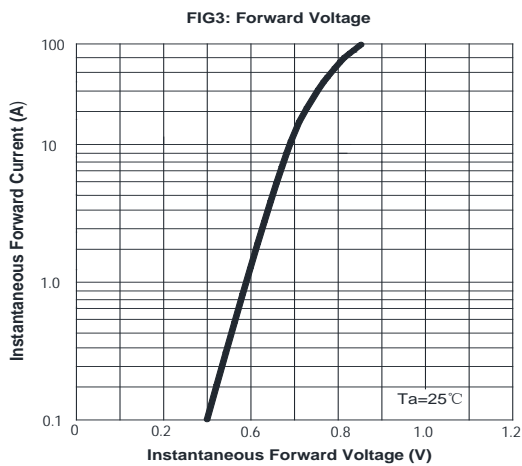
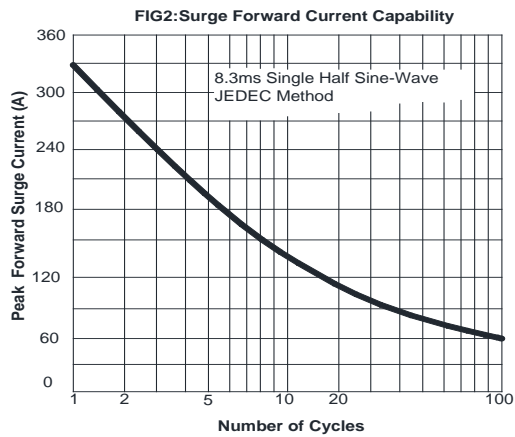
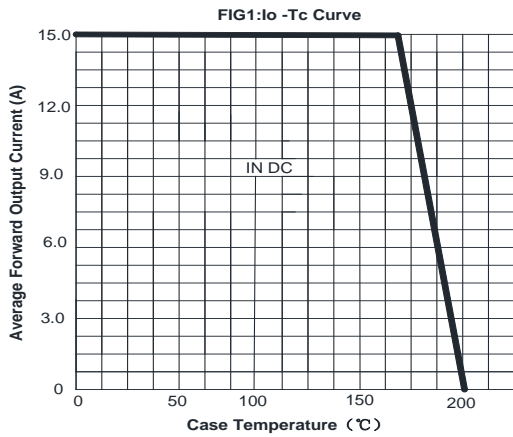


15SQ045

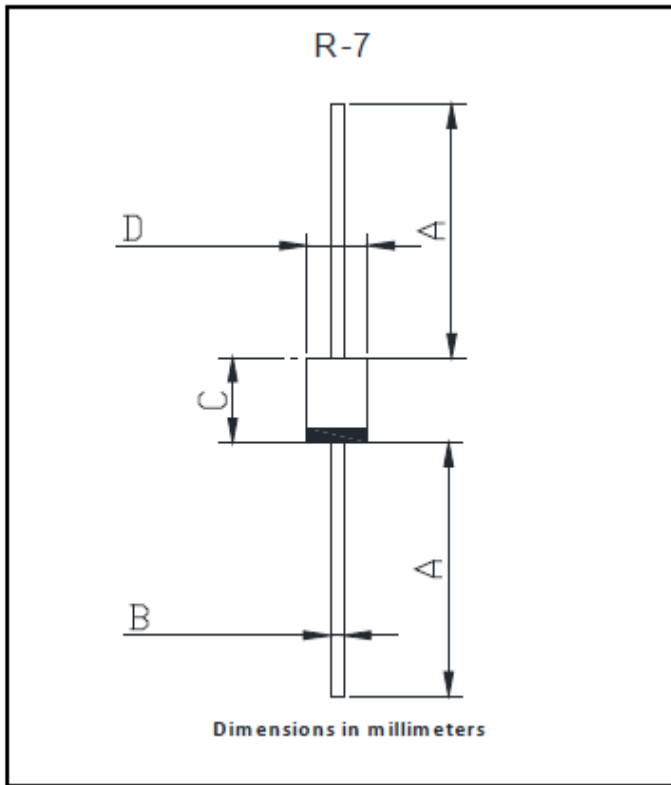
Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
12SQ045	Approximate 1.944	500	/	5000	Tape
12SQ045	Approximate 1.944	750	/	3000	Reel

Characteristics (Typical)



■Outline Dimensions



R-7		
Dim	Min	Max
A	25.4	/
B	1.2	1.4
C	7.3	7.7
D	7.8	8.2



Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.