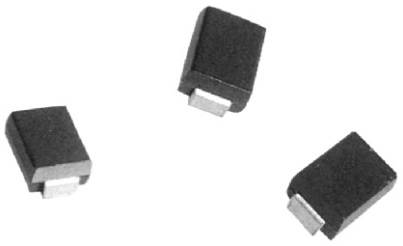
FR2A thru FR2K

SURFACE MOUNT ULTRAFAST RECTIFIER

CHENG-YI ELECTRONIC



VOLTAGE RANGE
-50 TO 800 VOLTS
CURRENT
-2.0 Amperes

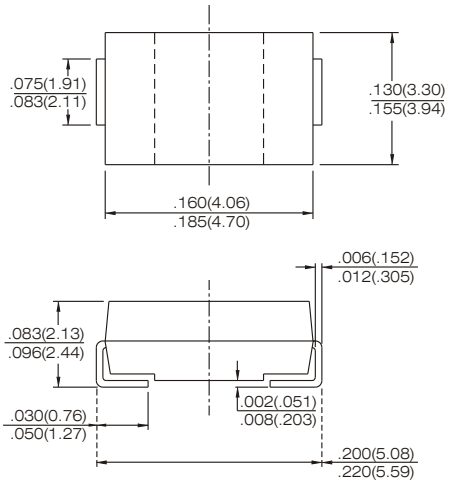
FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction
- High temperature soldering 260°C/10 seconds at terminals

MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard Packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounces, 0.093 gram

SMB/DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, reistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOLS	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Maximum Average Forward Rectified Current, at T_L=90°C	$I_{(AV)}$	2.0						A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0						A
Maximum Instantaneous Forward Voltage at 2.0A	V_F	1.30						V
Maximum DC Reverse Current @T_A=25°C at Rated DC Blocking Voltage @T_A=125°C	I_R	5.0 200						μA
Maximum Reverse Recovery Time (Note 1) T_J=25°C	T_{RR}	150				250	500	nS
Typical Junction Capacitance (Note 2)	C_J	40						pF
Maximum Thermal Resistance (Note 3)	$R\theta JL$	20.0						°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-50 to +150						°C

Notes : 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1.0 MHz and Applied Vr=4.0 volts.
3. 8.0mm^2 (.013mm thick) land areas.

FR2A thru FR2K

SURFACE MOUNT FAST SWITCHENG RECTIFIER

CHENG-YI ELECTRONIC

RATING AND CHARACTERISTICS CURVES
FR2A THRU FR2K

Fig. 1 - FORWARD CURRENT DERATING CURVE

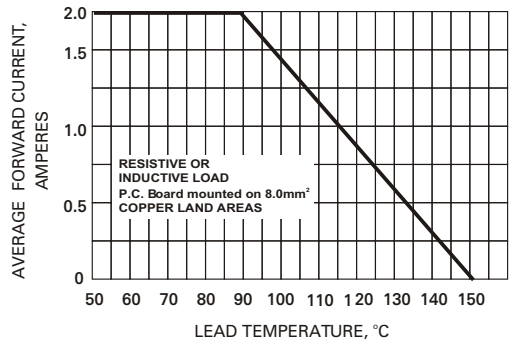


Fig. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

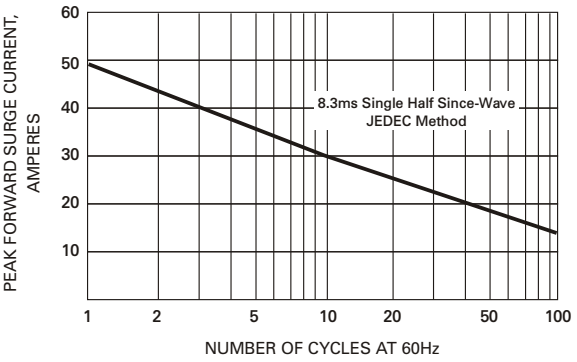


Fig. 3 - FORWARD CHARACTERISTICS

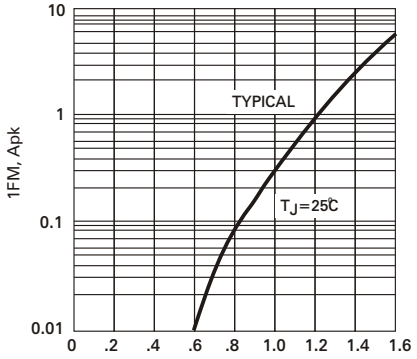


Fig. 4 - TYPICAL REVERSE CHARACTERISTICS

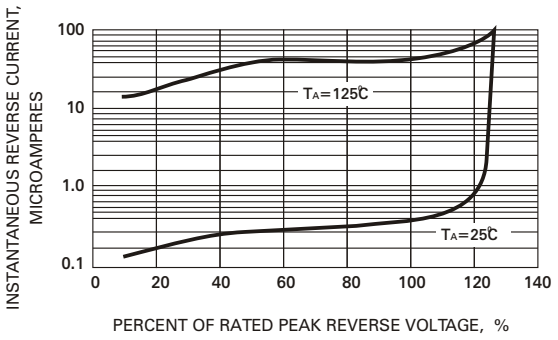


Fig. 5 - TYPICAL JUNCTION CHARACTERISTICS

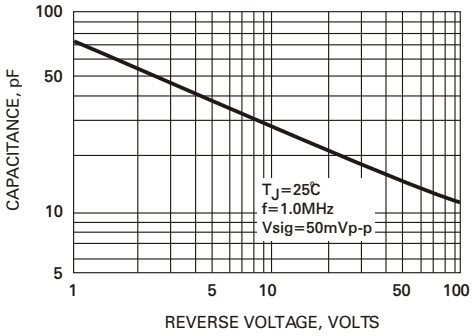


Fig. 6 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM