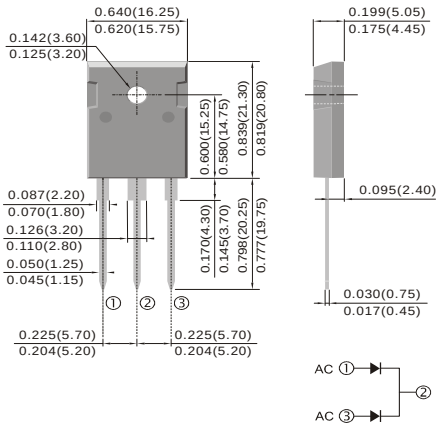
QRL6003PT

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 300 Volt **CURRENT** 60 Ampere

TO-247AD / TO-3P Unit : inch(mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- Super fast recovery times, high voltage
- Lead free in compliance with EU RoHS 2011/65/EU directive

MECHANICAL DATA

- Case: TO-247AD/TO-3P molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.2245 ounces, 6.3673 grams.

MAXIMUM RATINGS(T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	VALUE	UNIT
Maximum recurrent peak reverse voltage		V_{RRM}	300	V
Maximum rms voltage		V_{RMS}	210	V
Maximum dc blocking voltage		V_R	300	V
Maximum average forward rectified current	per device per diode	$I_{F(AV)}$	60 30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	per diode	I_{FSM}	400	A
Typical thermal resistance per diode	(Note 1)	$R_{\Theta JC}$	1.5	°C/W
Operating junction temperature range		T_J	-55 to + 150	°C
Storage temperature range		T_{STG}	-55 to + 150	°C

Note : 1. Mounted on semi-infinite heatsink.

QRL6003PT

ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage (per diode)	V_{BR}	I_R=0.5mA	300	-	-	V
Instantaneous forward voltage (per diode)	V_F	I_F=5A I_F=15A T_J=25°C I_F=30A	- - -	0.77 0.9 -	- - 1.25	V
		I_F=5A I_F=15A T_J=125°C I_F=30A	- - -	0.62 0.77 0.91	- - -	V
Reverse leakage current (per diode)	I_R	V_R=240V	-	0.1	-	μA
		V_R=300V T_J=25°C T_J=125°C	- -	- 25	5 -	μA μA
Reverse recovery time	T_{RR}	I_F=1A V_R=30V di/dt=100A/μs	-	-	35	ns
		I_F=0.5A I_R=1A I_{RR}=0.25A	-	-	45	ns
		I_F=30A V_R=200V di/dt=200A/μs	-	35	-	ns
Peak recovery current	I_{RRM}		-	7	-	A
Reverse recovery charge	Q_{RR}		-	85	-	nC

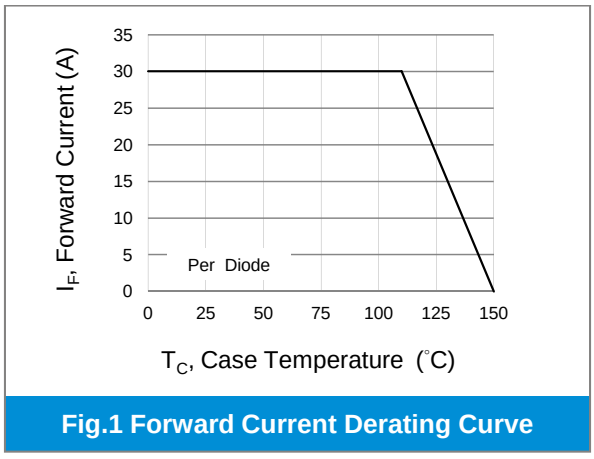


Fig.1 Forward Current Derating Curve

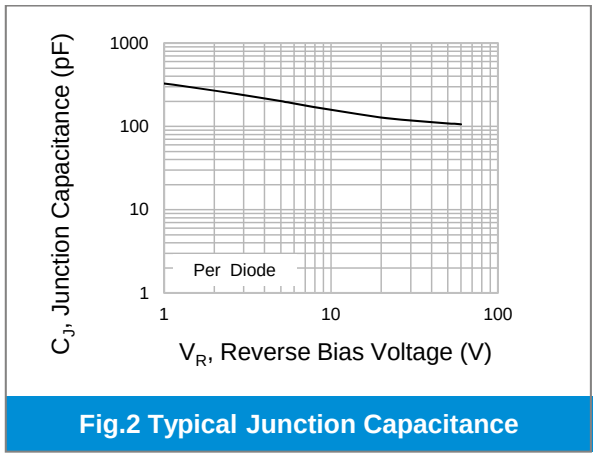


Fig.2 Typical Junction Capacitance

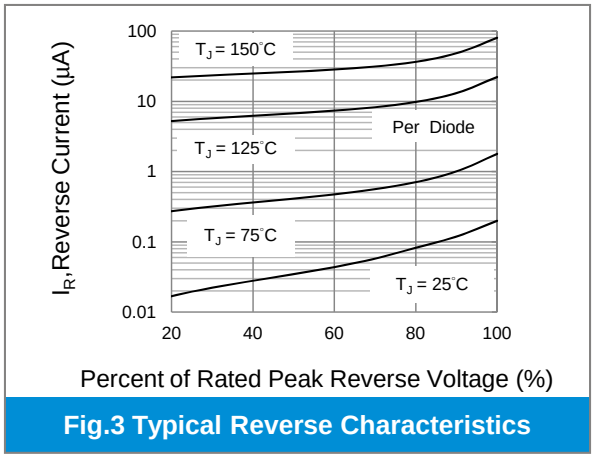


Fig.3 Typical Reverse Characteristics

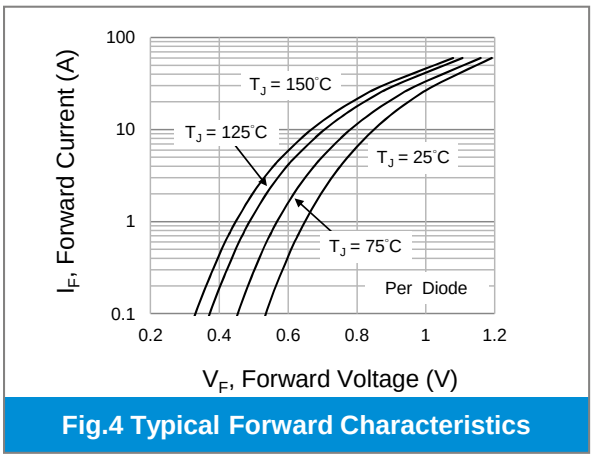


Fig.4 Typical Forward Characteristics

QRL6003PT

Part No_packing code_Version

QRL6003PT_T0_00001

QRL6003PT_T0_10001

For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.