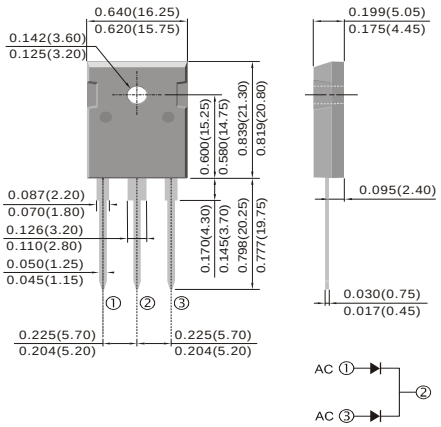
QRL6003PT

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

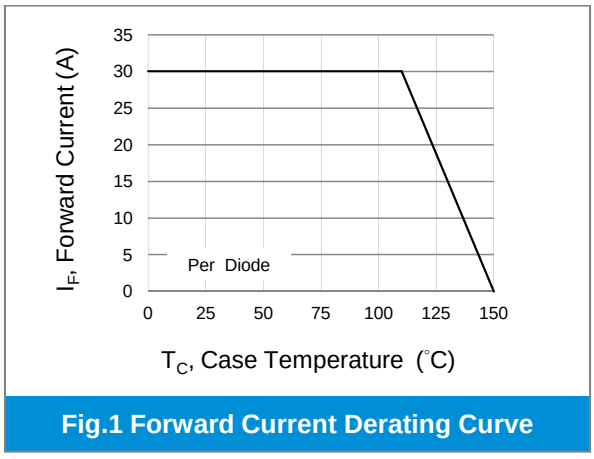


Fig.1 Forward Current Derating Curve

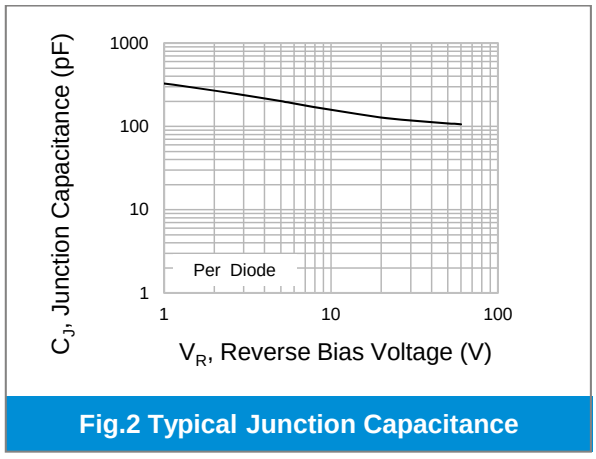


Fig.2 Typical Junction Capacitance

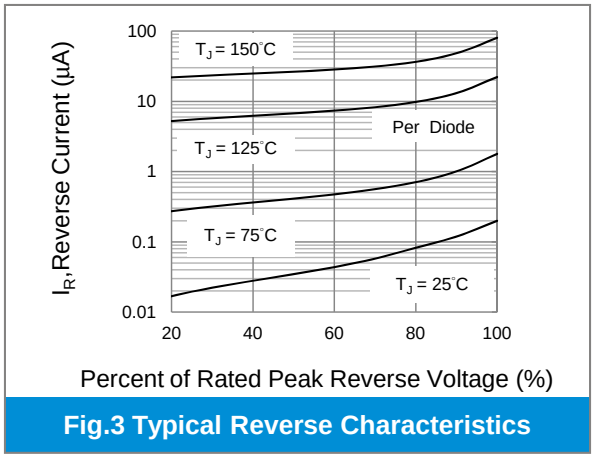


Fig.3 Typical Reverse Characteristics

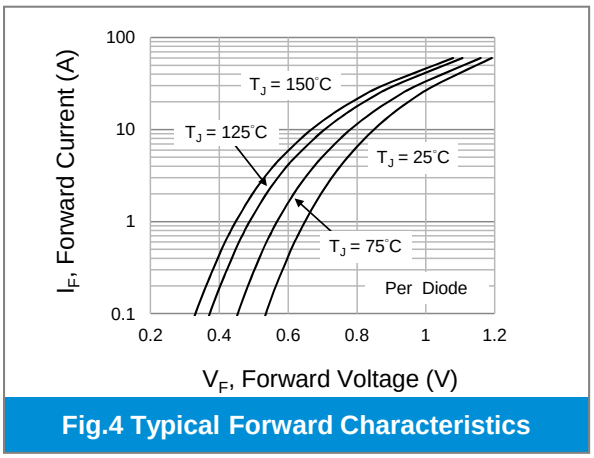


Fig.4 Typical Forward Characteristics

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			

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