



## JEFR0408G2

EPI Fast Soft Recovery Rectifier

Preliminary

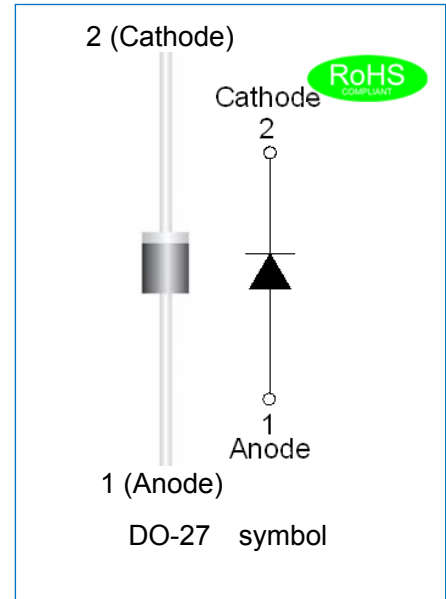
Rev.0.1

### DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Fast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for use in switching power supplies, inverters and as free wheeling diodes

### MECHANICAL DATA

- ✧ Case: JEDEC DO-27 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end



### ABSOLUTE MAXIMUM RATING (Rating at 25°C case temperature unless otherwise specified.)

Parameter	Symbol	JEFR0408G2	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	800	V
Maximum crest working reverse voltage	$V_{RWM}$	800	V
Maximum DC blocking voltage	$V_{DC}$	800	V
Maximum average forward current@ $T_A=35^\circ\text{C}$	$I_{F(AV)}$	4	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	70	A
Junction temperature and storage temperature range	$T_j, T_{stg}$	-55 to +175	°C

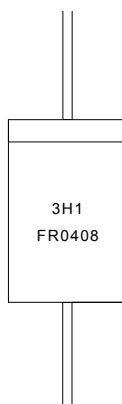
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C case temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Maximum forward voltage	$I_F=3A, T_j=150^\circ C$	$V_F$	-	-	1.53	V
	$I_F=3A, T_j=25^\circ C$				1.75	
	$I_F=4A, T_j=25^\circ C$				1.85	
Maximum DC reverse current at rated DC blocking voltage	$T_j=25^\circ C$	$I_R$	-	-	5	$\mu A$
	$T_j=150^\circ C$		-	-	200	
Maximum reverse recovery time	$I_F=0.5A, I_R=1A,$ $I_{REC}=0.25A$	$t_{rr}$	-	-	75	ns
	$I_F=1A, di/dt=50A/\mu s$		-	-	100	

**THERMAL RESISTANCES**

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-a)}$	Thermal resistance from junction to ambient free air	-	28	-	$^\circ C/W$

**MARKING**



FR	Fast Recovery Rectifier
04	$I_{F(AV)}=4A$
08	$V_{RRM}:800V$

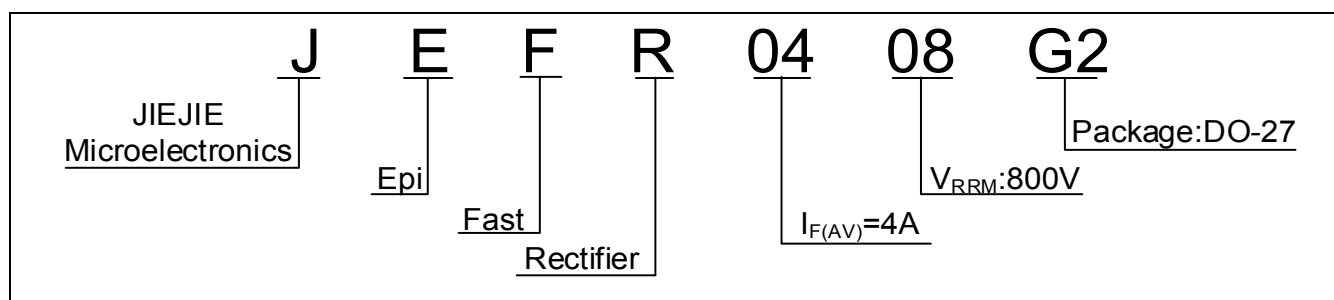
xH1: Month, 1、2、3 ~ 9、A、B、C

3x1:

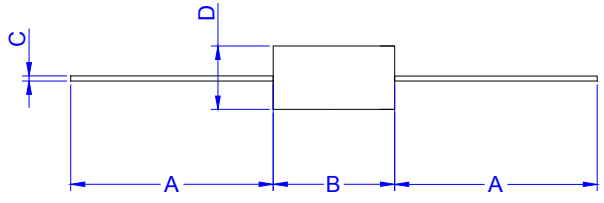
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

**ORDERING INFORMATION**



**PACKAGE MECHANICAL DATA**

 <p style="text-align: center;">DO-27</p>	Ref.	Dimensions			
		Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	25.40	-	1.000	-
	B	7.20	9.60	0.283	0.378
C	0.96	1.20	0.038	0.047	
D	4.80	5.40	0.189	0.213	

**PACKAGE INFORMATION-DO-27**

OUTLINE	UNIT WEIGHT (g/PCS) typ.	INNER BOX (PCS)	PER CARTON (PCS)
Bulk	1.142	1,000	10,000

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

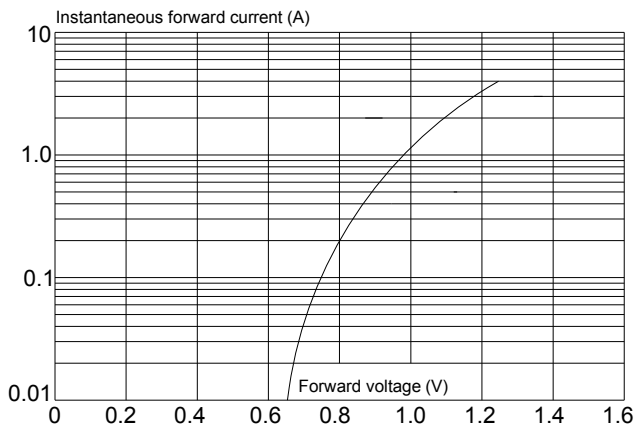


FIG.2: Typical reverse characteristics

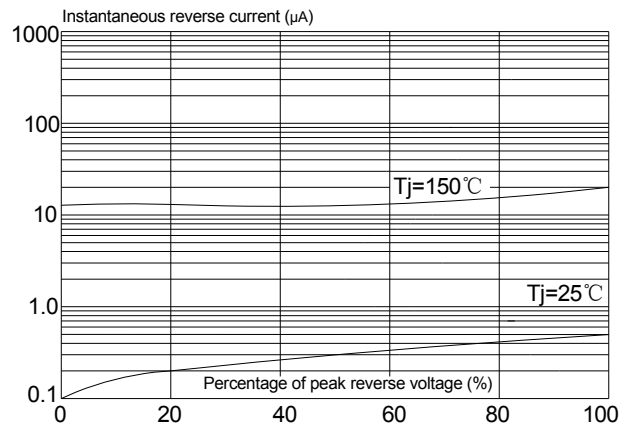


FIG.3: Maximum non-repetitive peak forward surge current

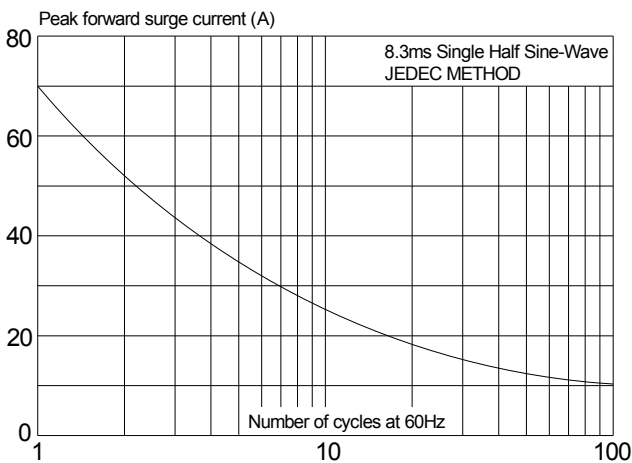


FIG.4: Forward current derating curve

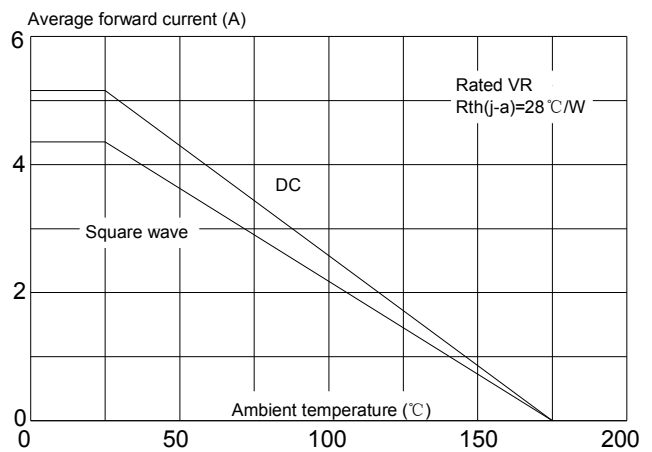


FIG.5: Power Dissipation

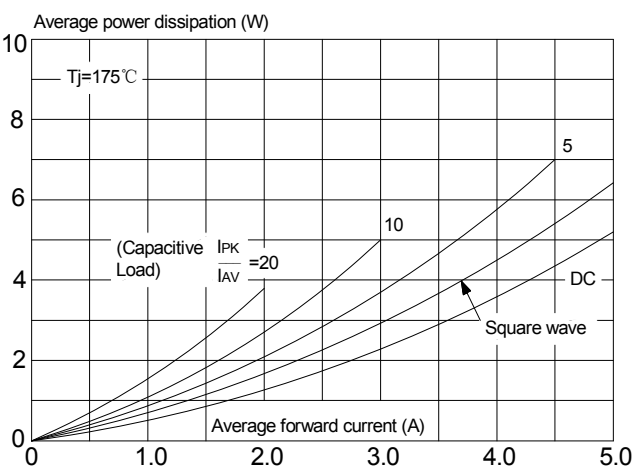
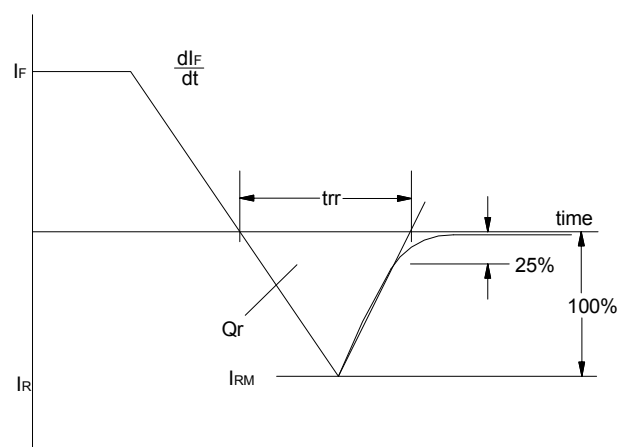


FIG.6: Reverse recovery definitions




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