

General Purpose Rectifier

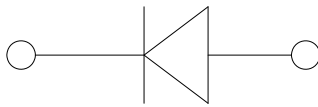


Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.



Mechanical Data

- **Package:** DO-204AL(DO-41)
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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	EM513	EM516	EM518
Device marking code			EM513	EM516	EM518
Maximum Repetitive Peak Reverse Voltage	VRRM	V	1600	1800	2000
Maximum RMS Voltage	VRMS	V	1120	1260	1400
Maximum DC blocking Voltage	VDC	V	1600	1800	2000
Average Forward Current @60Hz sine wave, Resistance load, Tc	IF(AV)	A	1.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25°C	IFSM	A	30		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			60		
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I²t	A²s	3.735		
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	6	7	
Storage Temperature	Tstg	°C	-55 ~ +150		
Junction Temperature	Tj	°C	-55 ~ +150		

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	EM513	EM516	EM518
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	1.2		
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	Tj=25°C	5		
			Tj=125°C	100		



EM513 THRU EM518

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	EM513	EM516	EM518
Typical Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	60		
	$R_{\theta J-L}$	$^{\circ}\text{C}/\text{W}$	30		
	$R_{\theta J-C}$	$^{\circ}\text{C}/\text{W}$	25		

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
EM513 ~ EM518	D1	Approximate 0.27	Approximate 5000	5000	50000	Tape
EM513 ~ EM518	C1	Approximate 0.27	Approximate 1000	1000	50000	Bulk

■ Characteristics (Typical)

FIG.1: I_o - T_c Curve

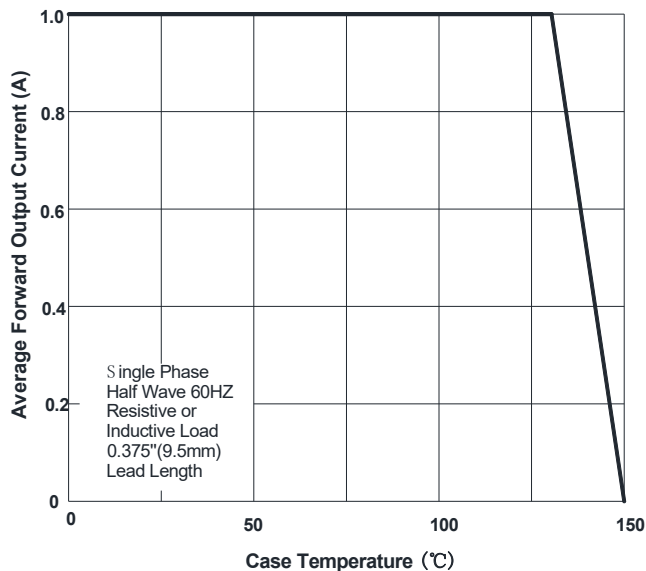


FIG.2: Forward Surge Current Capability

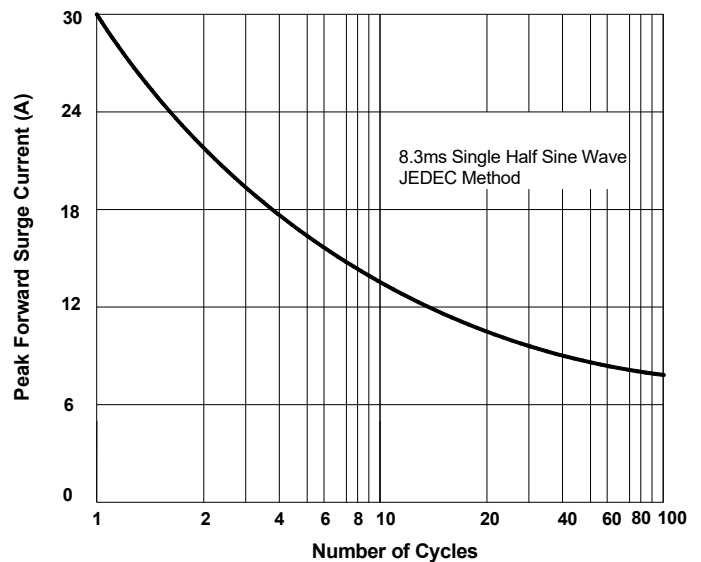


FIG.3: Forward Voltage

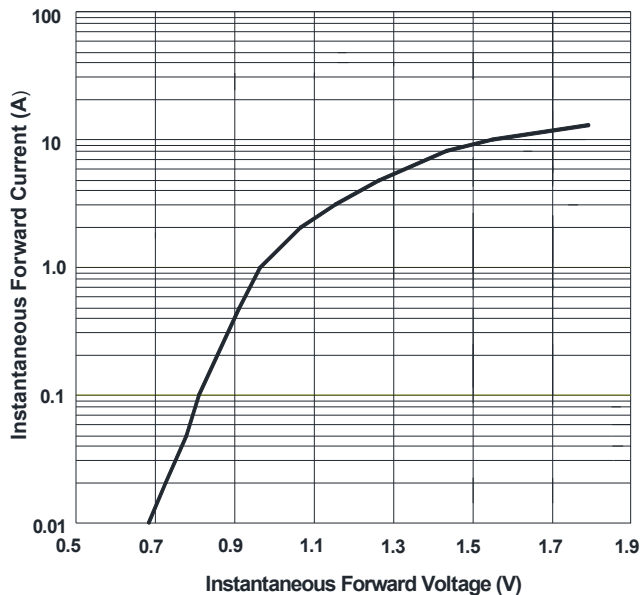
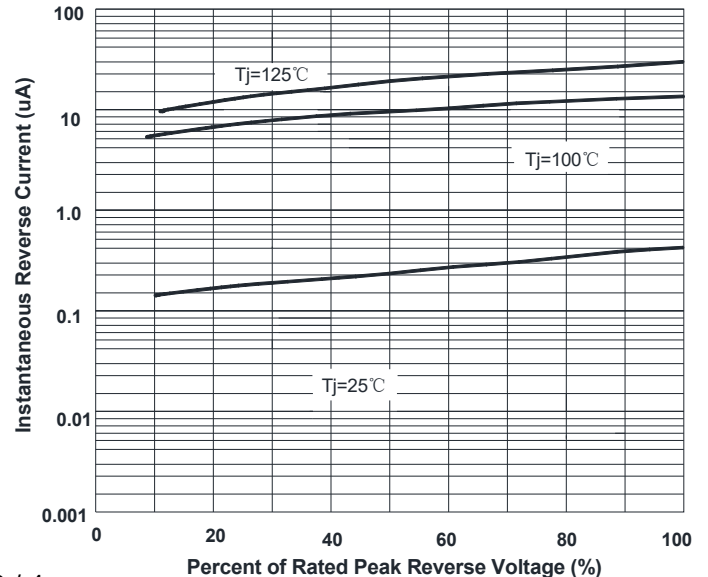


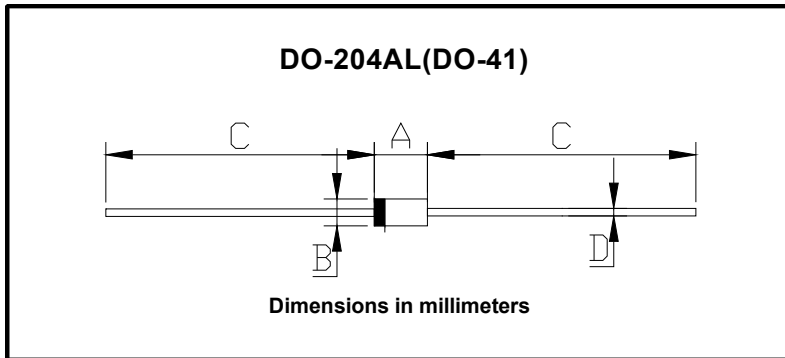
FIG.4: Typical Reverse Characteristics





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■ Outline Dimensions



DO-204AL(DO-41)		
Dim	Min	Max
A	4.22	5.21
B	2.03	2.72
C	25.4	/
D	0.69	0.86



EM513 THRU EM518

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