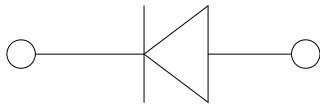
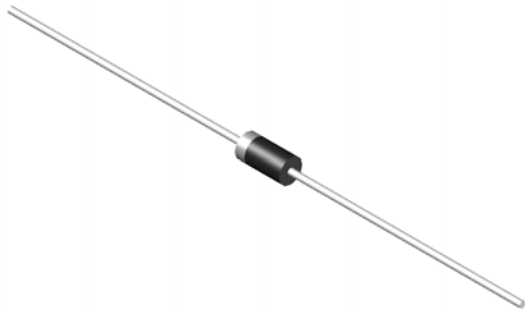


EM513 THRU EM518

General Purpose Rectifier

RoHS
COMPLIANT



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		

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

EM513 THRU EM518

PARAMETER	SYMBOL	UNIT	EM513	EM516	EM518
Typical Thermal Resistance	R _{θJA}	°C/W		60	
	R _{θJL}	°C/W		30	
	R _{θJC}	°C/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

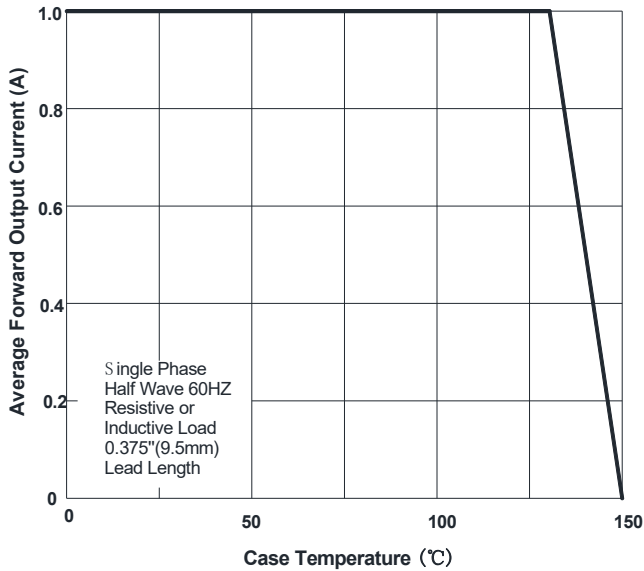


FIG.2: Forward Surge Current Capability

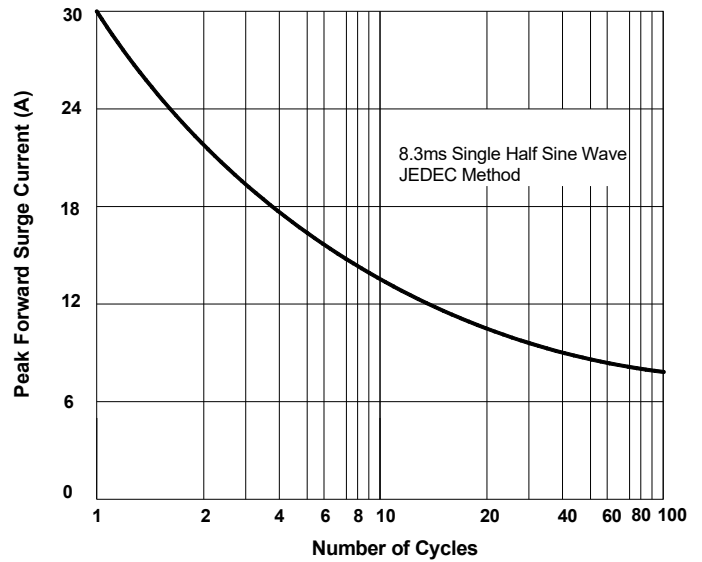


FIG.3: Forward Voltage

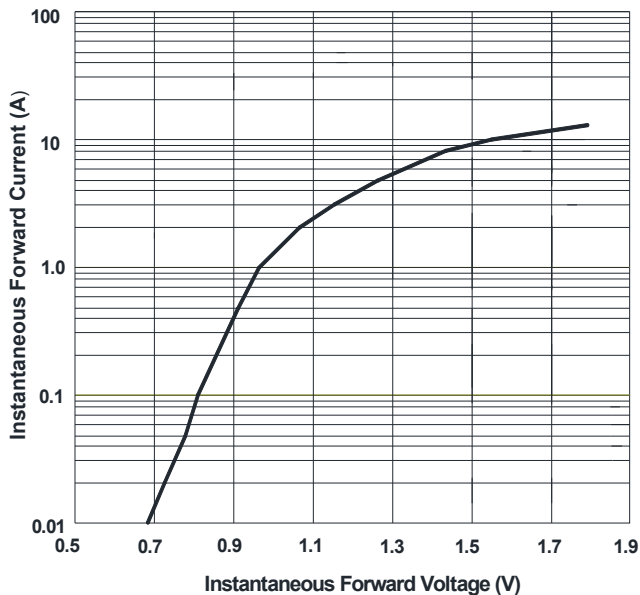
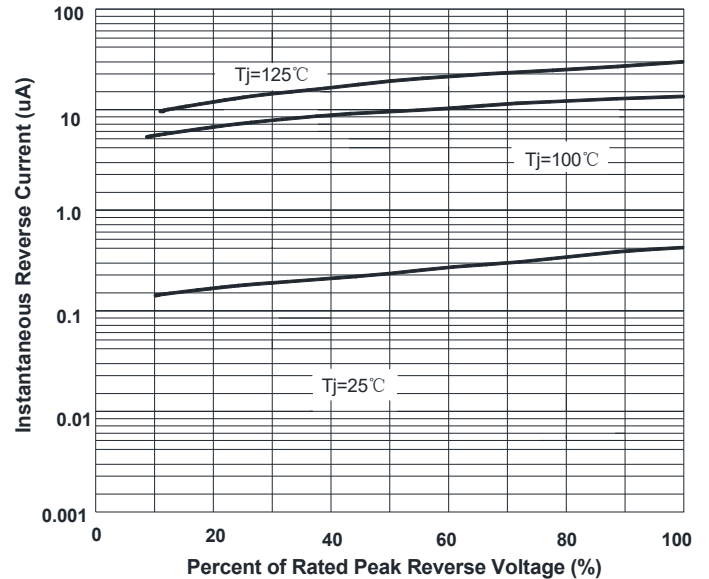
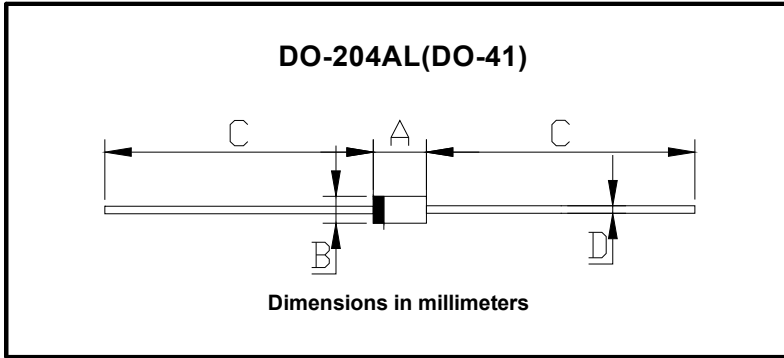


FIG.4: Typical Reverse Characteristics



■ Outline Dimensions

EM513 THRU EM518



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

Disclaimer

The information presented in this document is for reference only. Ningbo KLS Electronic Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), KLS or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.klsele.com> , or consult your nearest KLS's sales office for further assistance.