

Super Fast Recovery Rectifier

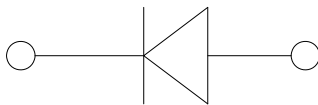


Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer 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 the cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURA160
Device marking code			MURA160
Maximum Repetitive Peak Reverse Voltage	VRRM	V	600
Maximum RMS Voltage	VRMS	V	420
Maximum DC blocking Voltage	VDC	V	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =75°C	IF(AV)	A	1.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	IFSM	A	35
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			70
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I ² t	A ² s	5
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	7.5
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150



MURA160

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURA160
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	1.28
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	2.5
			T _j =125°C	100
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	50

■Dynamic Characteristics

◆ MURA160

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Reverse Recovery Time	T _{RR}	ns	T _j =25°C	I _F =1A, di/dt=-50A/us V _{RM} =30V	-	49	-
			T _j =25°C	I _F =1A di/dt=-200A/us V _{RM} =400V	-	38	-
			T _j =125°C		-	59	-
Peak recovery current	I _{RRM}	A	T _j =25°C		-	3.5	-
			T _j =125°C		-	5.5	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C		-	67.4	-
			T _j =125°C		-	160.5	-
Non-repetitive avalanche energy	E _{AS}	mJ	T _j =25°C	I _R =1.1A, L=15 mH	9.1	-	-

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

PARAMETER	SYMBOL	UNIT	MURA160
Typical Thermal Resistance	R _{θJA}	°C/W	60

■Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURA160	D1	Approximate 0.30	5000	5000	50000	Tape
MURA160	C1	Approximate 0.30	1000	1000	50000	Bulk

■ Characteristics(Typical)

FIG.1: I_o - T_a Curve

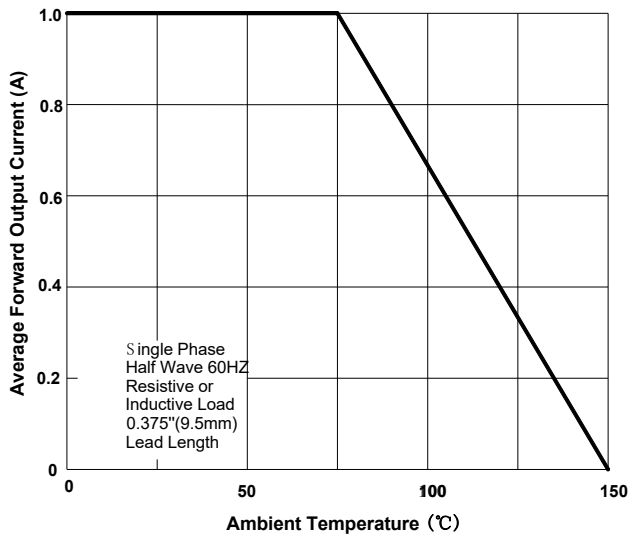


FIG.2: Forward Surge Current Capability

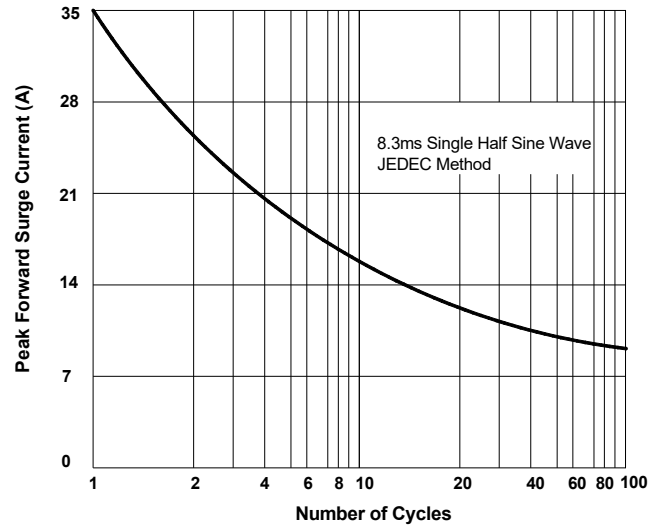


FIG.3: Typical Forward Voltage

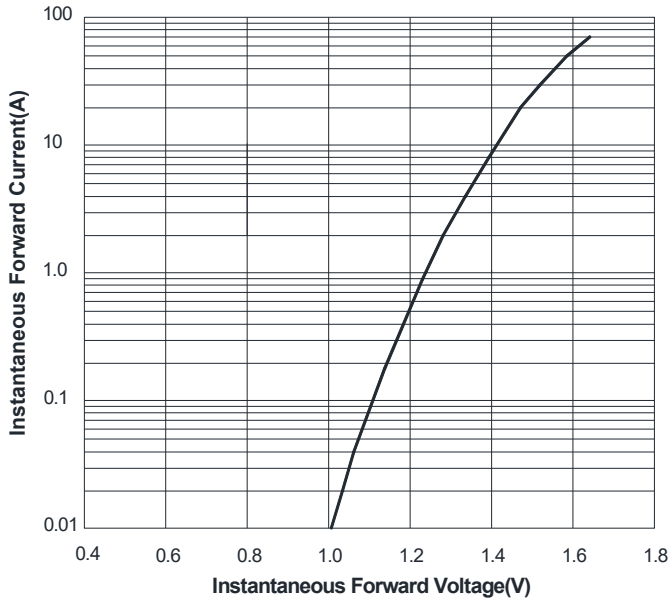


FIG.4: Typical Reverse Characteristics

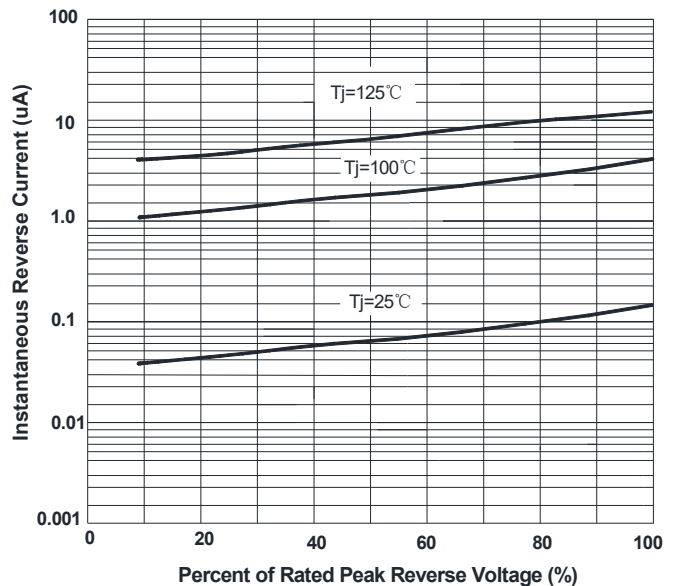
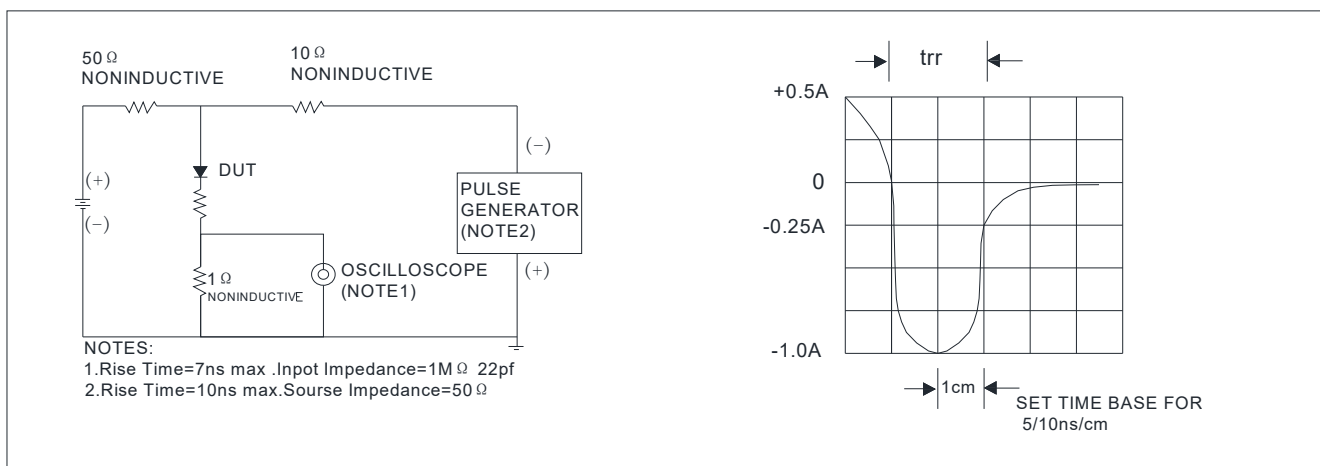
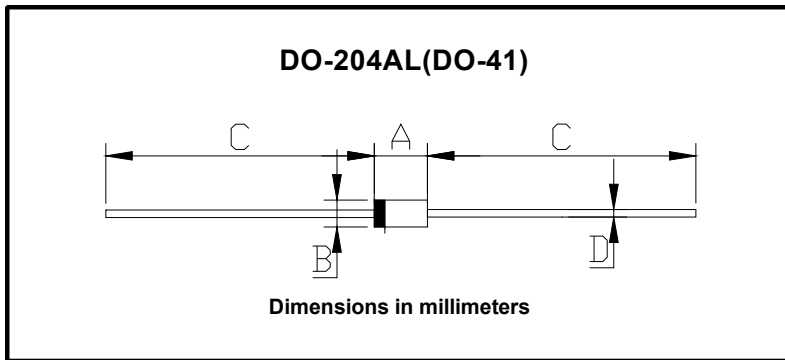


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





■ 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



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