

■ **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-204AC(DO-15)
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** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR220	MUR240	MUR260
Device marking code			MUR220	MUR240	MUR260
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	200	400	600
Maximum RMS Voltage	V_{RMS}	V	140	280	420
Maximum DC blocking Voltage	V_{DC}	V	200	400	600
Average Forward Current @60Hz sine wave, Resistance load, $T_a = 75^\circ\text{C}$	$I_{F(AV)}$	A	2.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	I_{FSM}	A	60		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^\circ\text{C}$			120		
Current squared time @1ms $\leq t \leq$ 8.3ms $T_j=25^\circ\text{C}$, Rating of per diode	I^2t	A^2s	15		
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C_j	pF	39	25	24
Storage Temperature	T_{stg}	$^\circ\text{C}$	-55 ~ +150		
Junction Temperature	T_j	$^\circ\text{C}$	-55 ~ +150		

■ **ELECTRICAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MUR220	MUR240	MUR260
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=2.0\text{A}$	0.875	1.25	
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	$T_j=25^\circ\text{C}$	2.5		
			$T_j=125^\circ\text{C}$	100		
Maximum reverse recovery time	t_{rr}	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	25	50	

■ DYNAMIC CHARACTERISTICS

■ MUR220

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	-	26	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =100V	-	21	-
			T _j =125°C		-	23	-
Peak recovery current	I _{RRM}	A	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =100V	-	2.6	-
			T _j =125°C		-	3.9	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =100V	-	26.8	-
			T _j =125°C		-	44.9	-
Non-repetitive avalanche energy	EAS	mJ	T _j =25°C	I _R =1.6 A, L=15 mH	19.2	-	-

■ MUR240

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	-	35	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =200V	-	27	-
			T _j =125°C		-	44	-
Peak recovery current	I _{RRM}	A	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =200V	-	3.6	-
			T _j =125°C		-	5.8	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =200V	-	49.5	-
			T _j =125°C		-	128.1	-
Non-repetitive avalanche energy	EAS	mJ	T _j =25°C	I _R =1.0 A, L=15 mH	7.5	-	-

■ MUR260

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	-	46	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =400V	-	36	-
			T _j =125°C		-	56	-
Peak recovery current	I _{RRM}	A	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =400V	-	3.6	-
			T _j =125°C		-	5.2	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =400V	-	63.5	-
			T _j =125°C		-	144.5	-
Non-repetitive avalanche energy	EAS	mJ	T _j =25°C	I _R =1.3A, L=15 mH	12.7	-	-

■ THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR220	MUR240	MUR260
Typical Thermal Resistance	R _{θJA}	°C/W		50	

■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR220 ~ MUR260	D1	Approximate 0.38	3000	3000	30000	Tape
MUR220 ~ MUR260	C1	Approximate 0.38	500	500	25000	Bulk

■ **CHARACTERISTICS (TYPICAL)**

FIG.1: I_o - T_a Curve

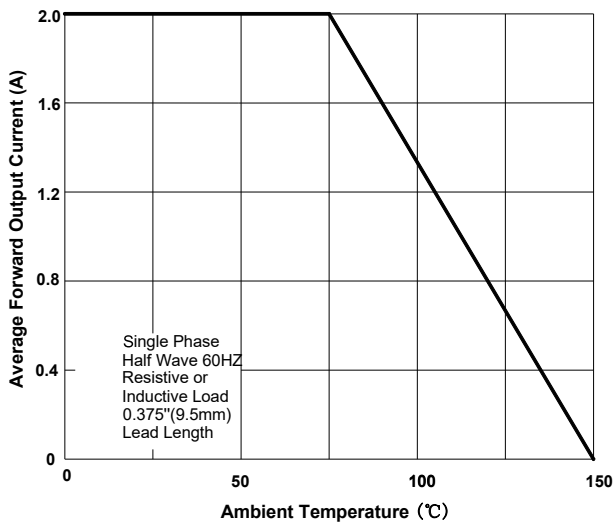


FIG.2: Forward Surge Current Capability

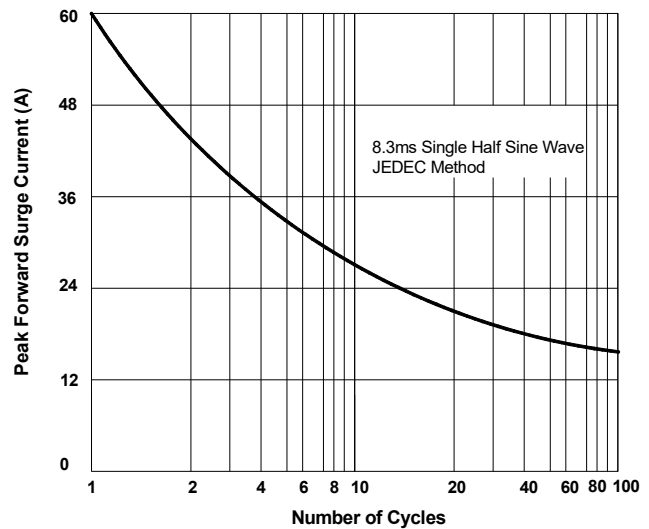


FIG.3: Forward Voltage

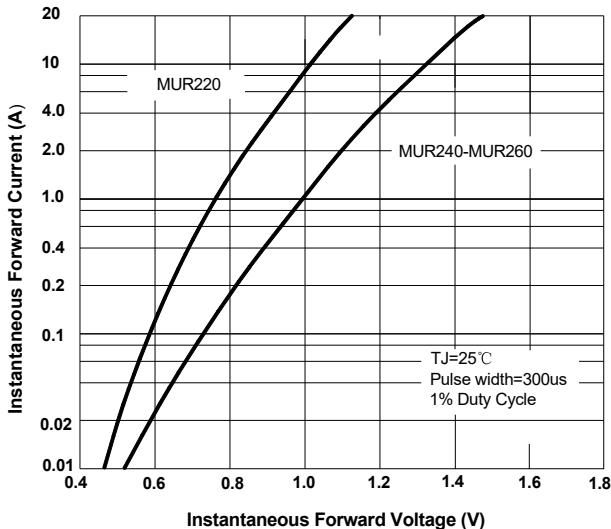
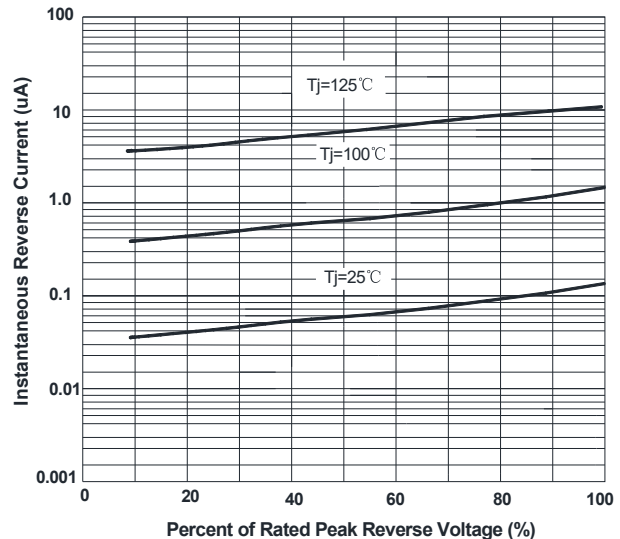
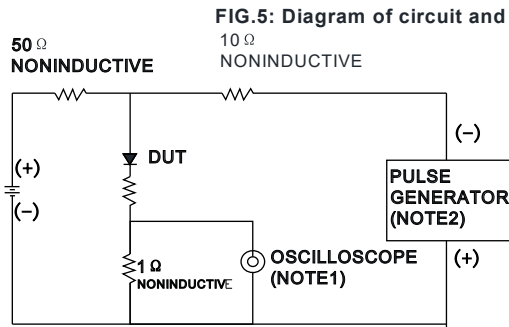
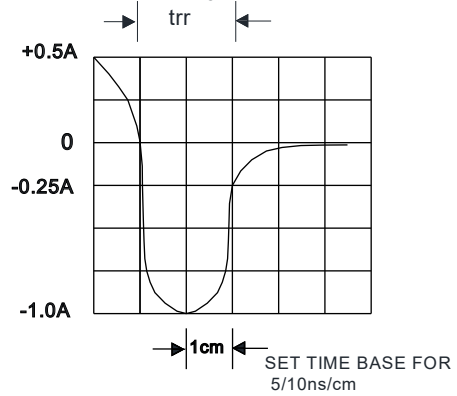


FIG.4: Typical Reverse Characteristics

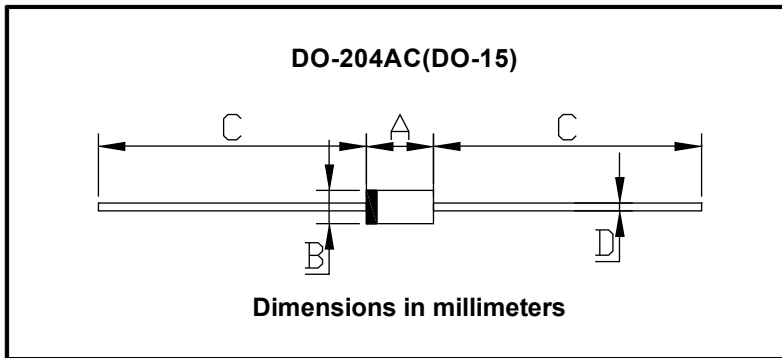




NOTES:
 1. Rise Time=7ns max .Input Impedance=1M Ω 22pf
 2. Rise Time=10ns max.Source Impedance=50 Ω



■ **OUTLINE DIMENSIONS**



DO-204AC(DO-15)		
Dim	Min	Max
A	5.80	7.60
B	2.60	3.60
C	25.4	/
D	0.70	0.90