



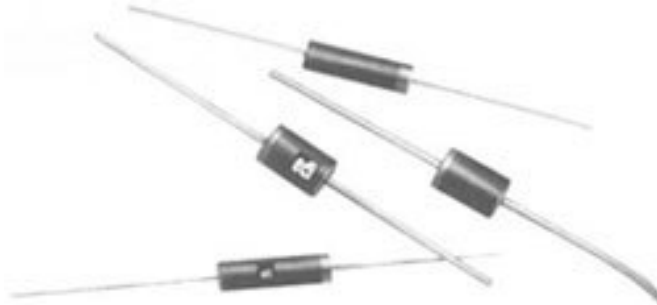
# XL XLR XLU XMR XMU

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## HIGH VOLTAGE RECOVERY FOR X-RAY AND INDUSTRIAL APPLICATIONS

### STANDARD AND FAST RECOVERY TYPES

- EPOXY MOLDED PACKAGE
- PLATINUM DOPED
- AVALANCHE CAPABILITY



X-RAY BOARD ASSEMBLIES ALSO AVAILABLE. INQUIRE.

#### ELECTRICAL CHARACTERISTICS (at TA=25°C Unless Otherwise Specified)

Type	XLR 5	XL 10	XLR 10	XLU 12	XLR 20	XMR 5	XMU 5	XMU 10	
Peak Reverse Voltage, Operating, $V_{R(OPER)}$	5	9	9	11	18	5	5	9	kV
Peak Reverse Voltage, Test, $V_{R(TEST)}$	5.5	10	10	12	20	5.5	5.5	10	kV
Average Rectified Forward Current in 55 °C Oil (Fig. 1)	200	220	200	100	100	500	300	300	mA
Max. Peak Surge Current, $I_{FRM}$ 1/2 Cycles @ 60Hz (Non Repetitive), Fig. 2	35	20	18	15	10	100	100	100	AMPS
Max. Peak Surge Current, $I_{FRM}$ , 10 Cycles @ 60Hz	11	6	5.5	5	2.7	25	25	25	AMPS
Max. Forward Voltage Drop, $V_{FM}$ @ $I_F$	$I_F=50mA$					$I_F=500mA$	$I_F=300mA$		V
	7	12	14	22	28	10	11	21	
Max. DC Reverse Current, $I_{RM}$ , @ $V_{R(TEST)}$ and 25 °C,	1	1	1	1	1	5	5	5	μA
Max. DC Reverse Current, $I_{RM}$ , @ $V_{R(TEST)}$ and 100 °C,	30	25	30	30	30	500	350	350	μA
Max. Reverse Recovery Time, $T_{RR}$ $I_F=50mA$ , $I_R=100mA$ , $I_{RR}=25mA$ , (Fig. 4)	175	NOT RATED	175	50	175	150	75	75	ns
Ambient Operating Temperature Range, $T_A$	-55 to +125°C								
Storage Temperature Range, $T_{STG}$	-55 to +150°C								

If operated over 10,000 v/inch in length, devices should be immersed in oil or re-encapsulated. [www.DataSheet4U.com](http://www.DataSheet4U.com)

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FIG.1

OUTPUT CURRENT vs AMBIENT TEMPERATURE

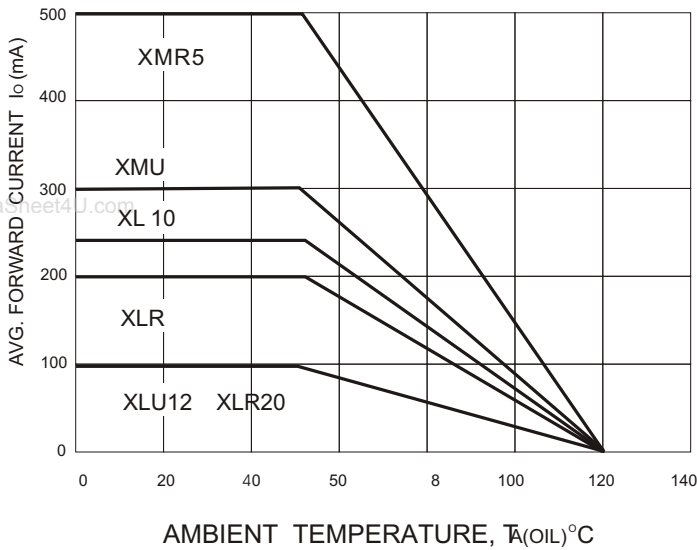


FIG.2

NON-REPETITIVE SURGE CURRENT  
PEAK SURGE CURRENT VS  
NUMBER OF CYCLES AT 60 Hz  
(SINE WAVE INPUT) AND  $T_A = 25^\circ C$

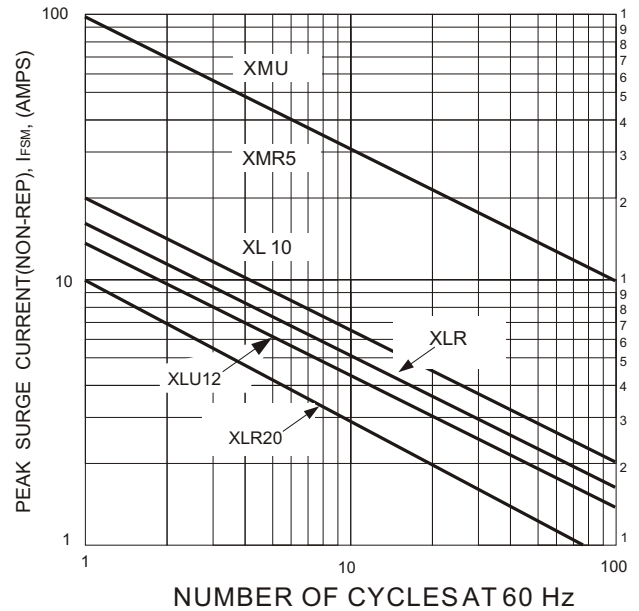
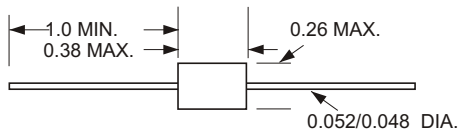
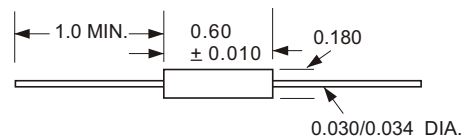


FIG.3  
MECHANICAL

Max. lead temperature for soldering,  $\frac{1}{8}$ " from body, 10 seconds @  $260^\circ C$



TIN PLATED COPPER LEADS  
XMR, XMU



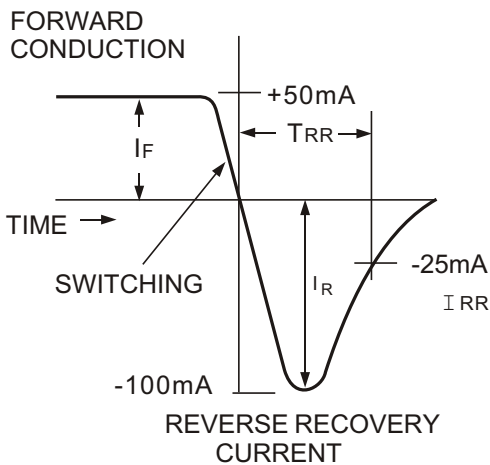
ALL DIMENSION IN INCHES

XL, XLR, XLU

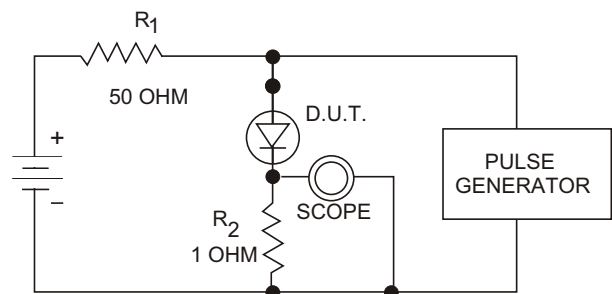
FIG.4

REVERSE RECOVERY TEST METHOD

RECOVERY WAVE FORM



RECOVERY TEST CIRCUIT



$R_1, R_2$  NON-INDUCTIVE RESISTORS  
PULSE GENERATOR-HEWLETT PACKARD 214A OR EQUIV.  
1 KC REP. RATE,  $10\mu$  SEC. PULSE WIDTH  
ADJUST PULSE AMPLITUDE FOR PEAK  $I_R$

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