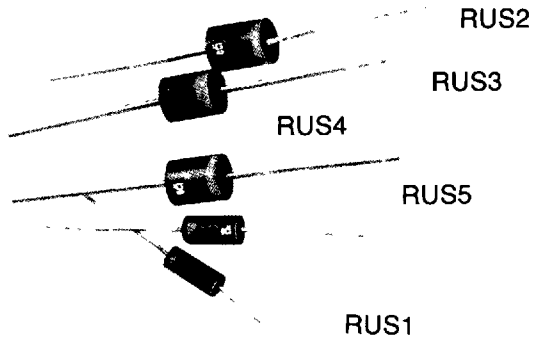


# 50 and 75ns ULTRA-FAST RECOVERY AXIAL LEAD RECTIFIER DIODES

- PRV to 1000 V
- 50 to 75ns recovery
- Small size
- High temperature stability
- High surge capability
- Exceptionally low leakage
- Avalanche characteristics



PRV	50V	100V	200V	400V	600V	800V	1000V
RUS 1	RUS105	RUS110	RUS120	RUS140	RUS160	RUS180	RUS1100
RUS 2	RUS205	RUS210	RUS220	RUS240	RUS260	RUS280	RUS2100
RUS 3	RUS305	RUS310	RUS320	RUS340	RUS360	RUS380	RUS3100
RUS 4	RUS405	RUS410	RUS420	RUS440	RUS460	RUS480	RUS4100
RUS 5	RUS505	RUS510	RUS520	RUS540	RUS560	RUS580	RUS5100

ELECTRICAL CHARACTERISTICS at  $T_A = 25^\circ\text{C}$  Unless Otherwise Specified

	RUS 1		RUS 2		RUS 3		RUS 4		RUS-5		UNITS
	50-600V	800-1000V	50-600V	800-1000V	50-600V	800-1000V	50-600V	800-1000V	50-600V	800-1000V	
Average Rectified Forward Current, $I_O$ @ $80^\circ\text{C}$ Lead Temperature, $L = \frac{3}{8}"$ (Fig 1)	1.5	1	3.5	3	5	4	5	4	2	1.5	Amps
Max DC Reverse Current @ PRV and $25^\circ\text{C}$ , $I_R$	1	1	5	5	5	5	5	5	5	5	$\mu\text{A}$
Max DC Reverse Current @ PRV and $100^\circ\text{C}$ , $I_R$	50	50	100	100	100	100	100	100	100	100	$\mu\text{A}$
Max Peak Surge Current, $I_{FSM}$ (8.3 $\mu\text{sec}$ ) (Fig 2)	50	50	100	75	240	175	320	250	100	75	Amps (pk)
Max Forward Voltage Drop @ $25^\circ\text{C}$ , $V_F$ with Forward Current pulse $I_F$ (300 $\mu\text{sec}$ width)	1.3 1	1.75 1	1.3 3	1.75 3	1.3 4	1.75 4	1.3 5	1.75 5	1.3 2	1.75 2	Volts Amps
Reverse Recovery Time, $t_{rr}$ (Fig 4)	50	75	50	75	50	75	50	75	50	75	nsec
Ambient Operating Temperature Range, $T_A$	-55 to +150 $^\circ\text{C}$										
Storage Temperature Range, $T_{STG}$	-55 to +150 $^\circ\text{C}$										



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FIG. 1

OUTPUT CURRENT VS LEAD TEMPERATURE

RESISTIVE OR INDUCTIVE LOAD  $f = 60\text{Hz}$  RECTIFIER  
LEADS ATTACHED TO HEAT SINKS AT LEAD LENGTH (L)

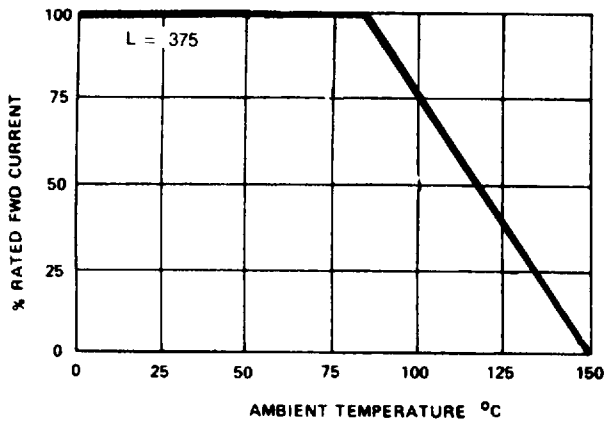


FIG. 2

NON-REPETITIVE SURGE CURRENT

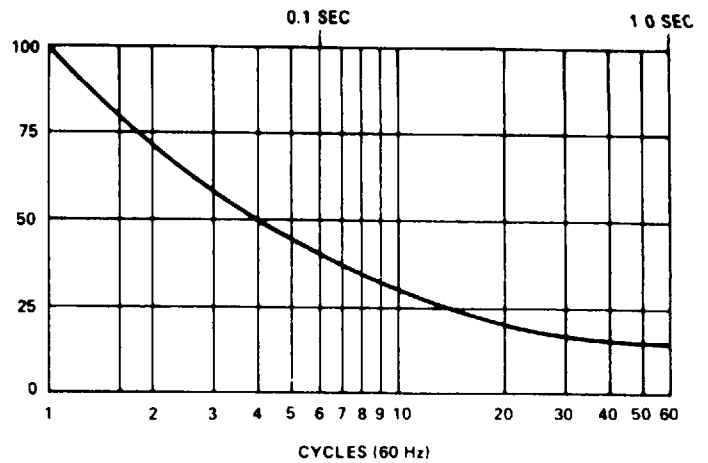
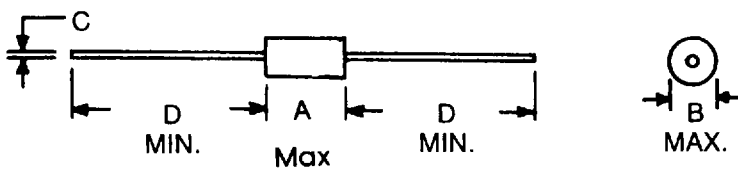
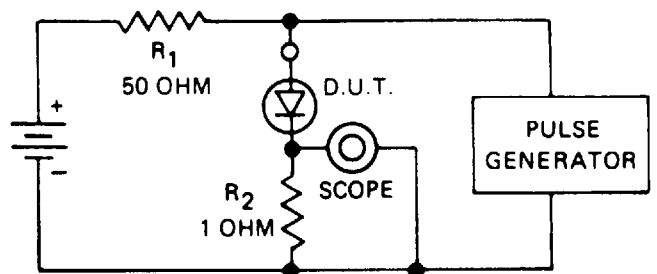
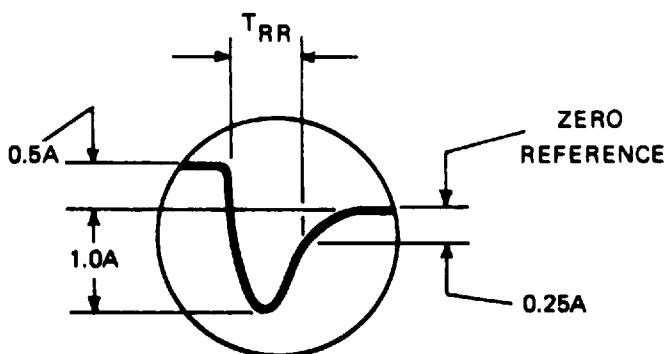


FIG. 3  
MECHANICAL



	DIMENSIONS (inches)			
	A	B	C	D
RUS1	.380	.160	$\frac{0.033}{0.031}$	1.00
RUS2	.380	.260	$\frac{0.052}{0.048}$	1.00
RUS3	.380	.260	$\frac{0.052}{0.048}$	1.00
RUS4	.380	.310	$\frac{0.052}{0.048}$	1.00
RUS5	.380	.200	$\frac{0.033}{0.031}$	1.00

TYPICAL REVERSE RECOVERY WAVEFORM



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