DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

MUR2505-MUR2560

25A ULTRAFAST RECTIFIER

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	2505	2510	2520	2540	2560	Unit
Peak repetitive reverse voltage	V_{RRM}	50	100	200	400	600	
Maximum RMS voltage	V_{RMS}	35	70	40	280	420	V
DC blocking voltage	V_R	50	100	200	400	600	
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	25.0 @ T_L = 145°C					A
Peak forward surge current (8.3ms, half sine)	I_{FSM}	500					A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +175					°C

ELECTRICAL CHARACTERSITICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	2505	2510	2520	2540	2560	Unit
Maximum instantaneous forward voltage(1) (I_F = 25.0A, T_A= 25°C)	V_F	0.950			1.250		V
Maximum DC reverse current (1) (Rated dc voltage, T_A= 25°C)	I_R	10					µA
Maximum reverse recovery time (I_F = 0.5A, I_R = 1.0A, I_{REC} = 0.25A)	t_{rr}	50			75		ns
Typical junction capacitance @ 1.0MHz, V_R = 4.0V	C_J	100					pF

Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

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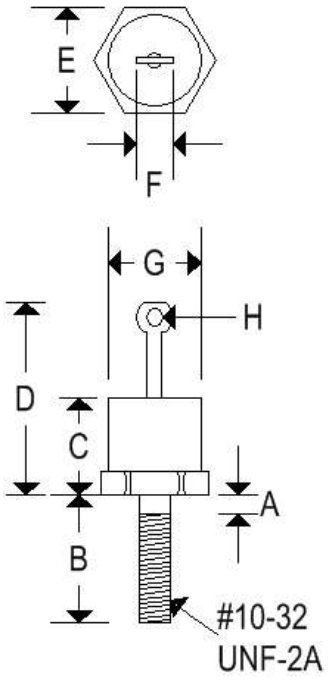
MECHANICAL CHARACTERISTICS

Case	DO-4(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-4(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	-	0.078	-	1.981
B	0.422	0.453	10.719	11.506
C	-	0.405	-	10.287
D	-	0.800	-	20.320
E	0.420	0.440	10.668	11.176
F	-	0.250	-	6.350
G	-	0.424	-	10.770
H	0.066	-	1.676	-

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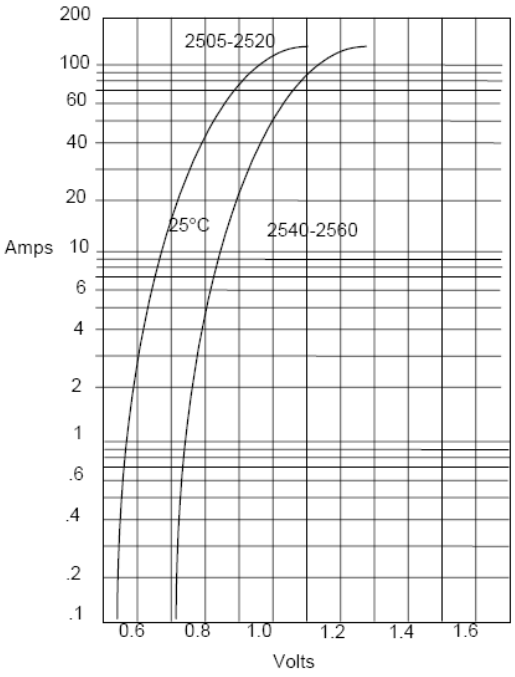
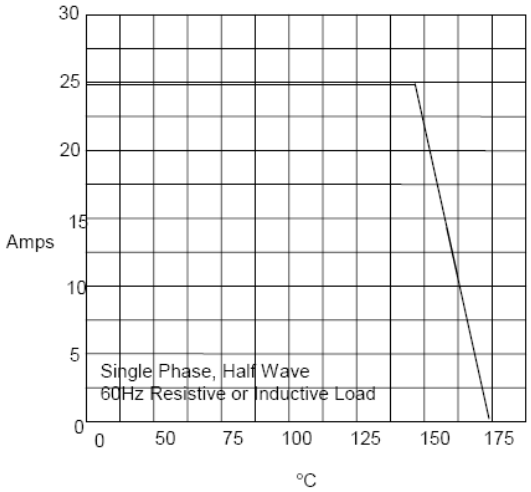
Figure 1
Typical Forward Characteristics



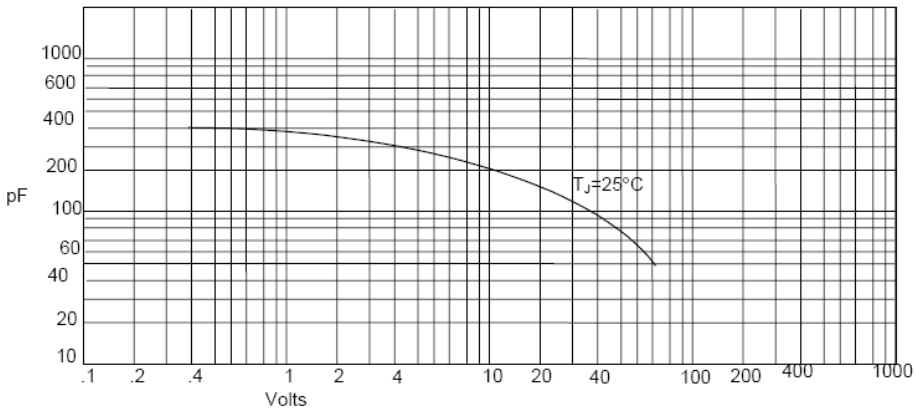
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

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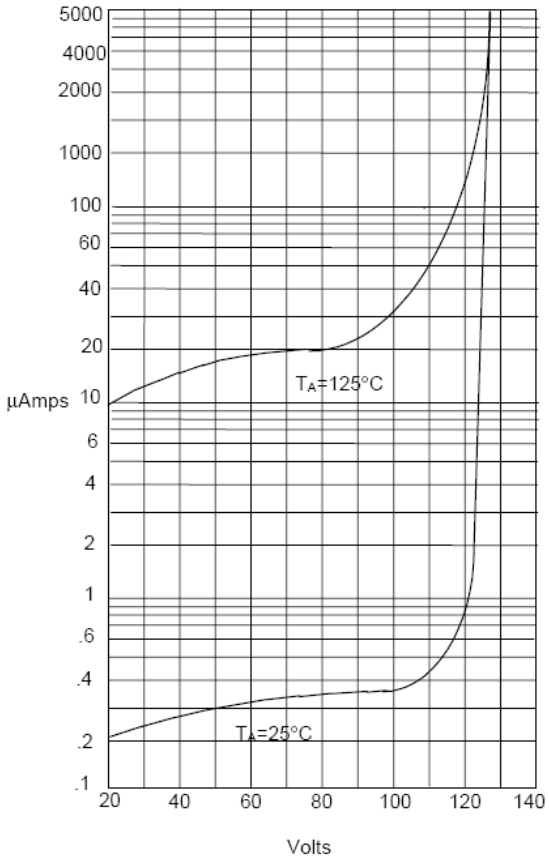
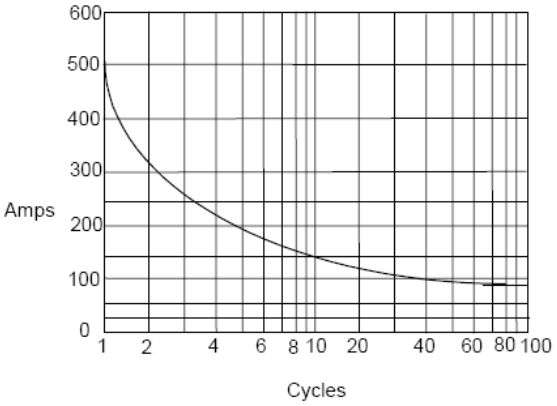
Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles