



DYNAMIC RECOVERY CHARACTERISTICS (T _J = 25 °C unless otherwise specified)							
PARAMETER	SYMBOL	TEST CONDITIONS		MIN.	TYP.	MAX.	UNITS
Reverse recovery time	t _{rr}	I _F = 1.0 A, di _F /dt = 50 A/μs, V _R = 30 V		-	-	35	ns
		T _J = 25 °C	I _F = 15 A di _F /dt = 200 A/μs V _R = 160 V	-	22	-	
		T _J = 125 °C		-	39	-	
Peak recovery current	I _{RRM}	T _J = 25 °C		-	1.6	-	A
		T _J = 125 °C		-	4.1	-	
Reverse recovery charge	Q _{rr}	T _J = 25 °C		-	19	-	nC
		T _J = 125 °C		-	90	-	

THERMAL - MECHANICAL SPECIFICATIONS						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Maximum junction and storage temperature range	T_J, T_{Stg}		-65	-	175	$^{\circ}\text{C}$
Thermal resistance, junction to case	R_{thJC}		-	-	1.5	$^{\circ}\text{C}/\text{W}$
Thermal resistance, junction to ambient	R_{thJA}		-	-	50	
Thermal resistance, case to heatsink	R_{thCS}	Mounting surface, flat, smooth and greased	-	0.5	-	
Weight			-	2.0	-	g
			-	0.07	-	oz.
Mounting torque			6.0 (5.0)	-	12 (10)	kgf · cm (lbf · in)
Marking device		Case style TO-263AB (D ² PAK)	MURB1520			
		Case style TO-262	MURB1520-1			

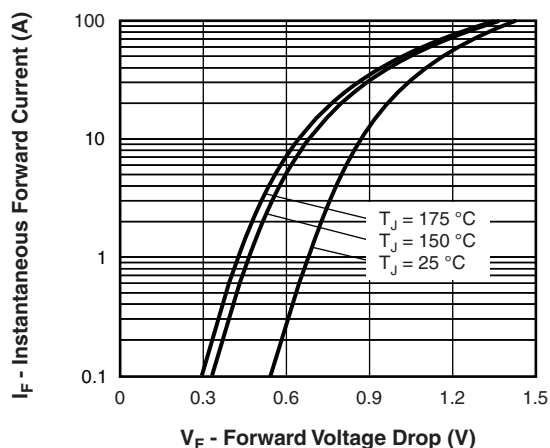


Fig. 1 - Typical Forward Voltage Drop Characteristics

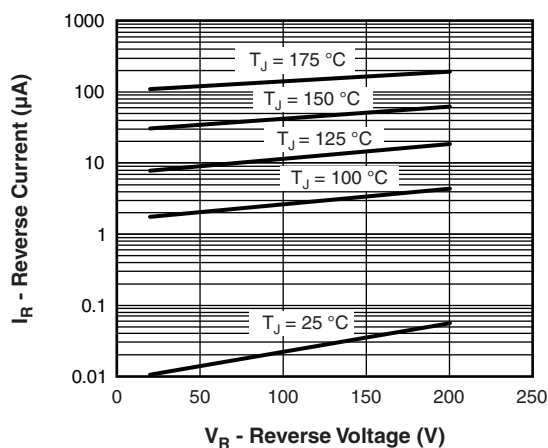


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

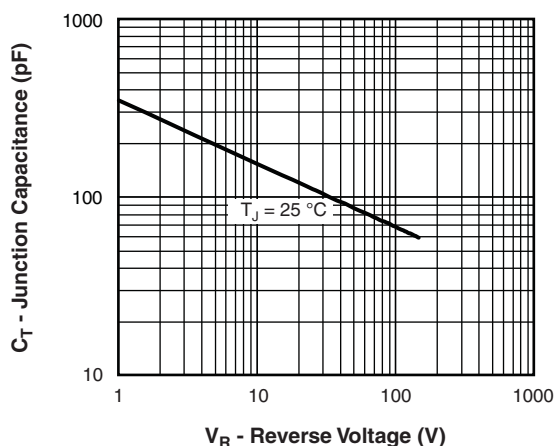


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

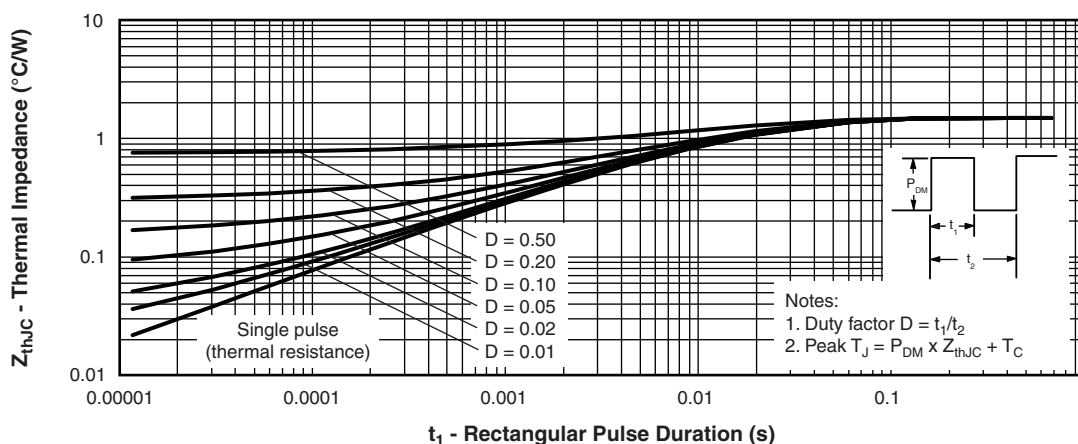
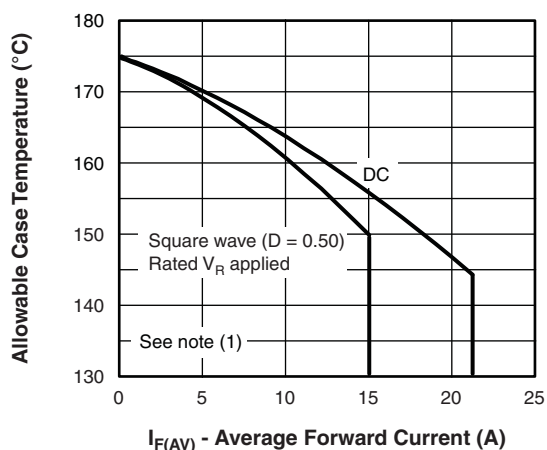

Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics


Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current

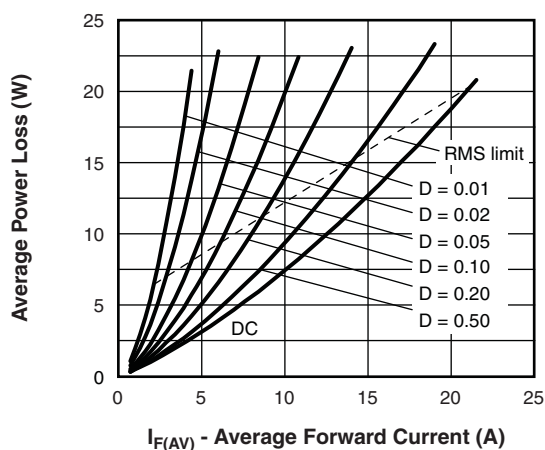
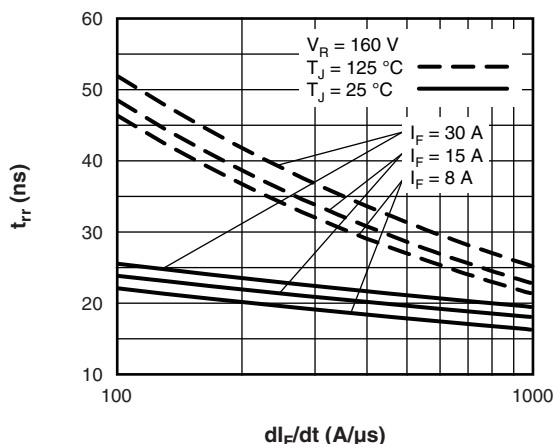
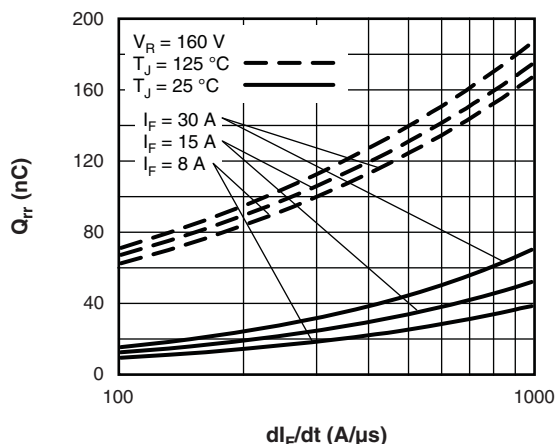


Fig. 6 - Forward Power Loss Characteristics


Fig. 7 - Typical Reverse Recovery Time vs. di_F/dt

Fig. 8 - Typical Stored Charge vs. di_F/dt

Note

- (1) Formula used: $T_C = T_J - (Pd + Pd_{REV}) \times R_{thJC}$;
 Pd = Forward power loss = $I_{F(AV)} \times V_{FM}$ at $(I_{F(AV)}/D)$ (see fig. 6);
 Pd_{REV} = Inverse power loss = $V_{R1} \times I_R (1 - D)$; I_R at V_{R1} = Rated V_R

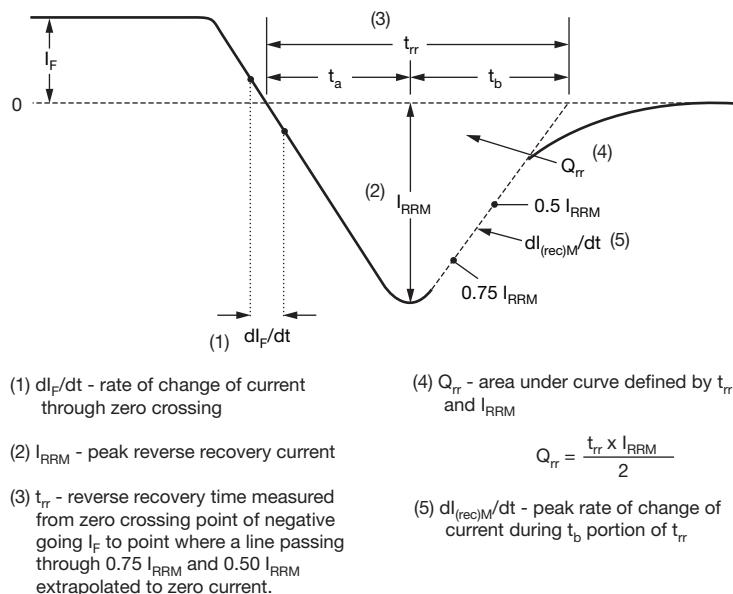


Fig. 9 - Reverse Recovery Waveform and Definitions

**ORDERING INFORMATION TABLE**

Device code	VS-	MUR	B	15	20	-1	TRL	PbF
	1	2	3	4	5	6	7	8

- | | | |
|----------|---|--|
| 1 | - | Vishay Semiconductors product |
| 2 | - | Ultrafast MUR series |
| 3 | - | B = D ² PAK/TO-262 |
| 4 | - | Current rating (15 = 15 A) |
| 5 | - | Voltage rating (20 = 200 V) |
| 6 | - | <ul style="list-style-type: none">• None = D²PAK• -1 = TO-262 |
| 7 | - | <ul style="list-style-type: none">• None = tube (50 pieces)• TRL = tape and reel (left oriented, for D²PAK package)• TRR = tape and reel (right oriented, for D²PAK package) |
| 8 | - | PbF = lead (Pb)-free |

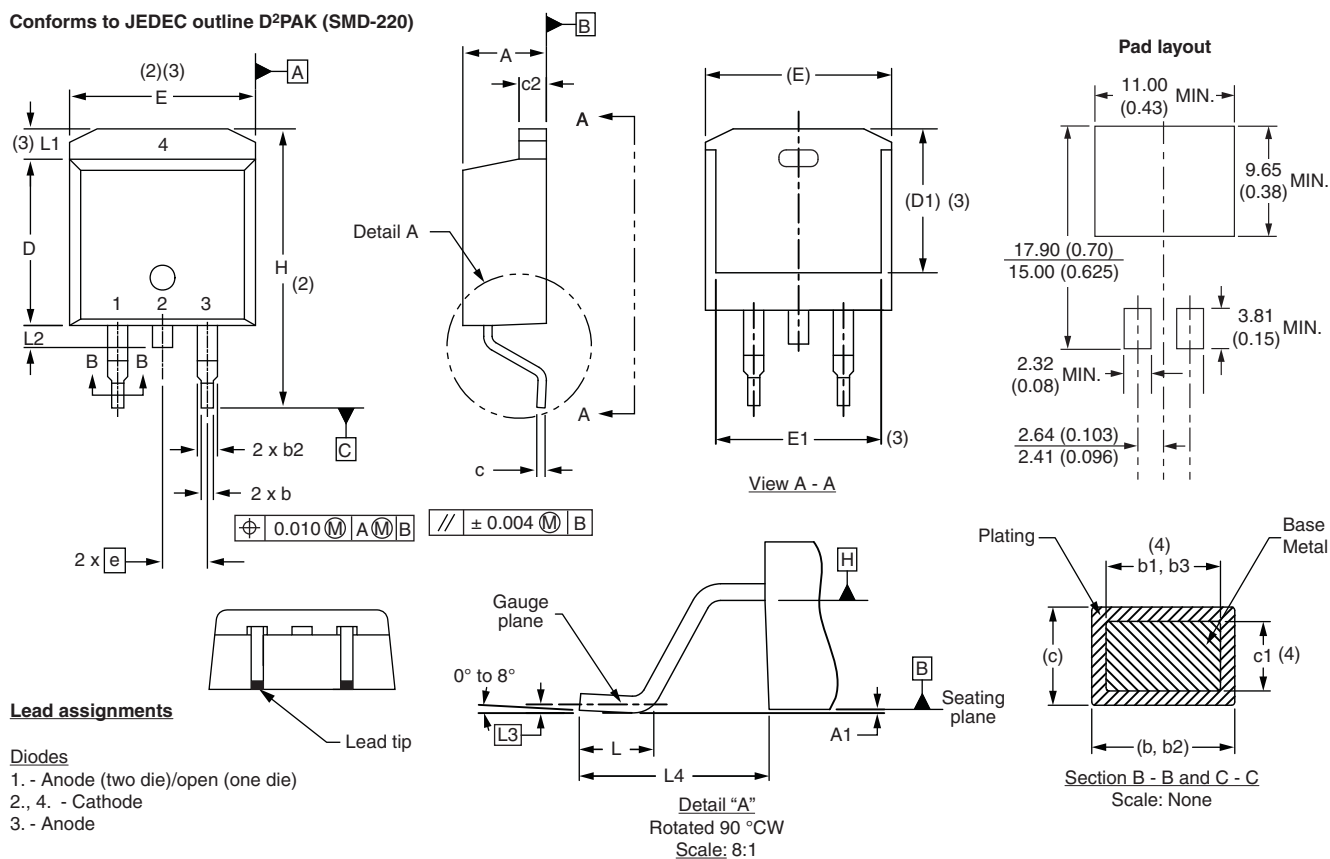
ORDERING INFORMATION (Example)			
PREFERRED P/N	QUANTITY PER T/R	MINIMUM ORDER QUANTITY	PACKAGING DESCRIPTION
VS-MURB1520PbF	50	1000	Antistatic plastic tube
VS-MURB1520TRRPbF	800	800	13" diameter reel
VS-MURB1520TRLPbF	800	800	13" diameter reel
VS-MURB1520-1PbF	50	1000	Antistatic plastic tube

LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95014
Part marking information	www.vishay.com/doc?95008
Packaging information	www.vishay.com/doc?95032
SPIICE model	www.vishay.com/doc?95271

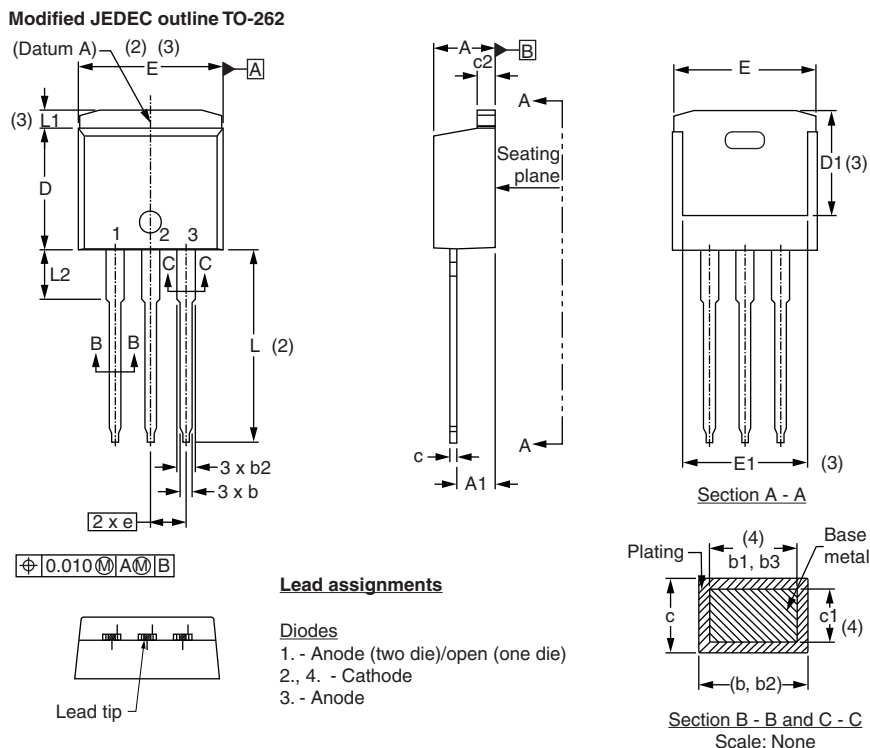
D²PAK, TO-262

DIMENSIONS - D²PAK in millimeters and inches

Conforms to JEDEC outline D²PAK (SMD-220)



DIMENSIONS - TO-262 in millimeters and inches



SYMBOL	MILLIMETERS		INCHES		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	4.06	4.83	0.160	0.190	
A1	2.03	3.02	0.080	0.119	
b	0.51	0.99	0.020	0.039	
b1	0.51	0.89	0.020	0.035	4
b2	1.14	1.78	0.045	0.070	
b3	1.14	1.73	0.045	0.068	4
c	0.38	0.74	0.015	0.029	
c1	0.38	0.58	0.015	0.023	4
c2	1.14	1.65	0.045	0.065	
D	8.51	9.65	0.335	0.380	2
D1	6.86	8.00	0.270	0.315	3
E	9.65	10.67	0.380	0.420	2, 3
E1	7.90	8.80	0.311	0.346	3
e	2.54 BSC		0.100 BSC		
L	13.46	14.10	0.530	0.555	
L1	-	1.65	-	0.065	3
L2	3.56	3.71	0.140	0.146	

Notes

- (1) Dimensioning and tolerancing as per ASME Y14.5M-1994
- (2) Dimension D and E do not include mold flash. Mold flash shall not exceed 0.127 mm (0.005") per side. These dimensions are measured at the outmost extremes of the plastic body
- (3) Thermal pad contour optional within dimension E, L1, D1 and E1
- (4) Dimension b1 and c1 apply to base metal only
- (5) Controlling dimension: inches

- (6) Outline conform to JEDEC TO-262 except A1 (maximum), b (minimum) and D1 (minimum) where dimensions derived the actual package outline



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