ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop See fig. 1	V_{FM} (1)	9 A	T_J = 25 °C	0.48	V
		18 A		0.57	
		9 A	T_J = 125 °C	0.42	
		18 A		0.52	
Maximum reverse leakage current See fig. 2	I_{RM} (1)	T_J = 25 °C	V_R = Rated V_R	1.75	mA
		T_J = 125 °C		70	
Maximum junction capacitance	C_T	V_R = 5 V_{DC}, (test signal range 100 kHz to 1 MHz) 25 °C		900	pF
Typical series inductance	L_S	Measured lead to lead 5 mm from body		10.0	nH
Maximum voltage rate of change	dV/dt	Rated V_R		10 000	V/µs

Note

(1) Pulse width < 300 µs, duty cycle < 2 %

THERMAL - MECHANICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum junction and storage temperature range	T_J, T_{Stg}		- 55 to 150	°C
Maximum thermal resistance, junction to lead	R_{thJL}	DC operation; see fig. 4 1/8" lead length	8.0	°C/W
Typical thermal resistance, junction to air	R_{thJA}		44	
Approximate weight			1.4	g
			0.049	oz.
Marking device		Case style DO-204AR (JEDEC)	90SQ030	
			90SQ035	
			90SQ040	
			90SQ045	

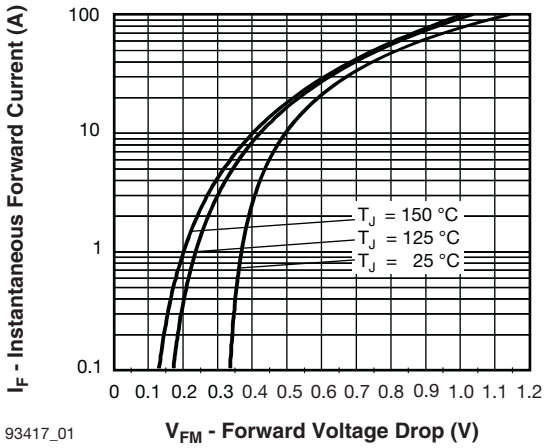


Fig. 1 - Maximum Forward Voltage Drop Characteristics

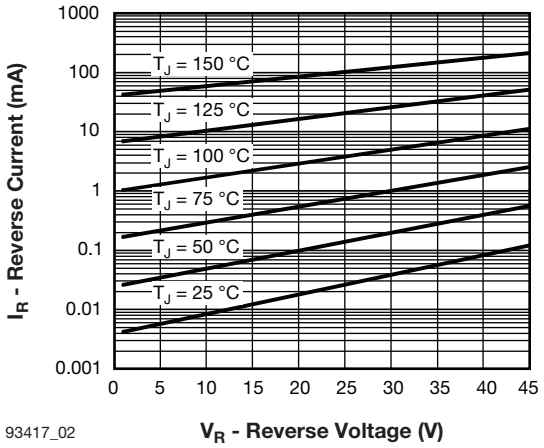


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

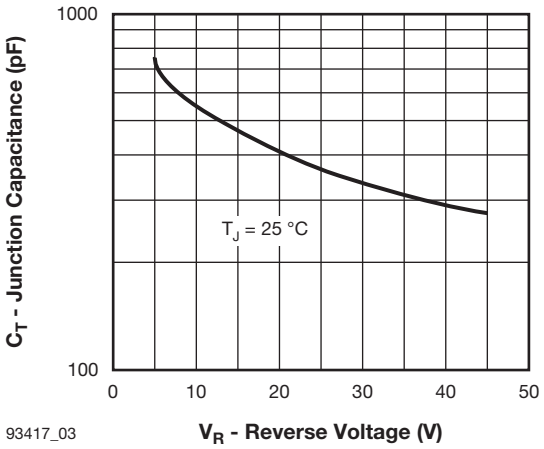


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

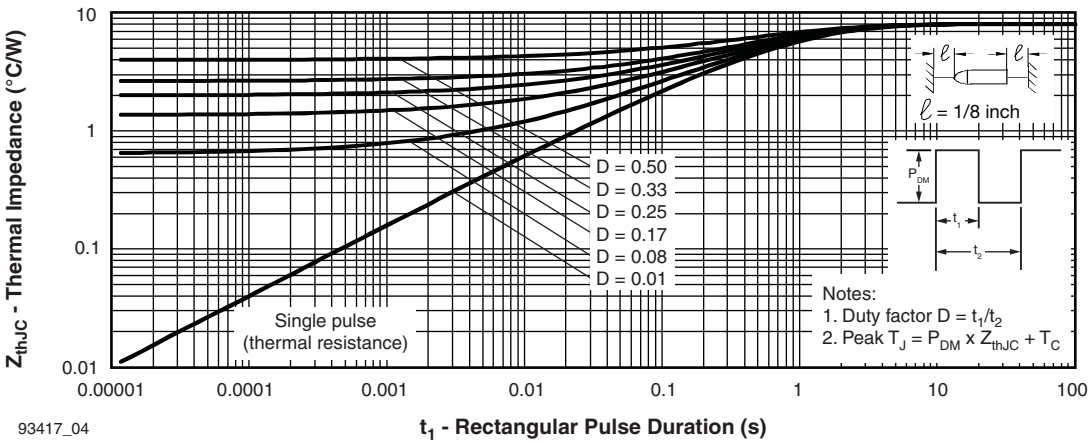


Fig. 4 - Maximum Thermal Impedance Z_{thJL} Characteristics

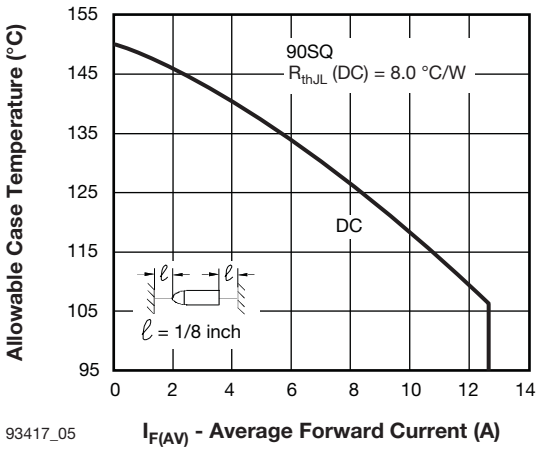


Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current

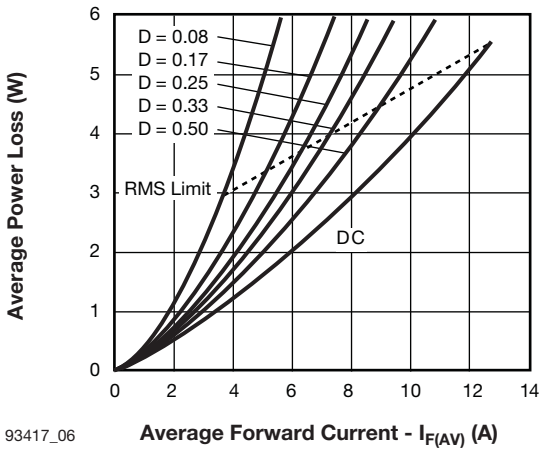


Fig. 6 - Forward Power Loss Characteristics

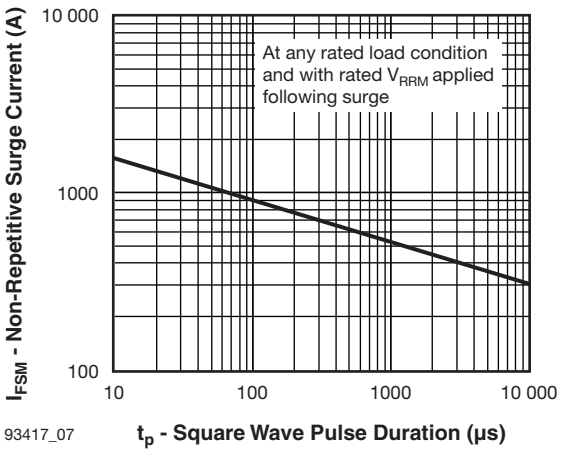


Fig. 7 - Maximum Non-Repetitive Surge Current

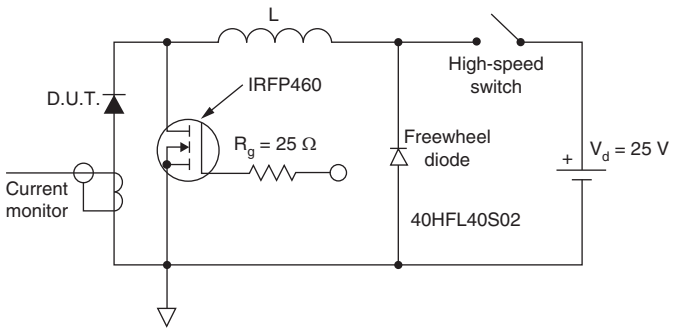


Fig. 8 - Unclamped Inductive Test Circuit

ORDERING INFORMATION TABLE

Device code

VS-	90	S	Q	045	TR	-M3
1	2	3	4	5	6	7

1 - Vishay Semiconductors product

2 - 90 = Current x 10

3 - S = DO-204AR

4 - Q = Schottky Q.. series

5 - Voltage rating
- 030 = 30 V
- 035 = 35 V
- 040 = 40 V
- 045 = 45 V

6 - • TR = Tape and reel package
• None = Bulk package

7 - Environmental digit
- None = Lead (Pb)-free and RoHS compliant
- -M3 = Halogen-free, RoHS compliant, and terminations lead (Pb)-free

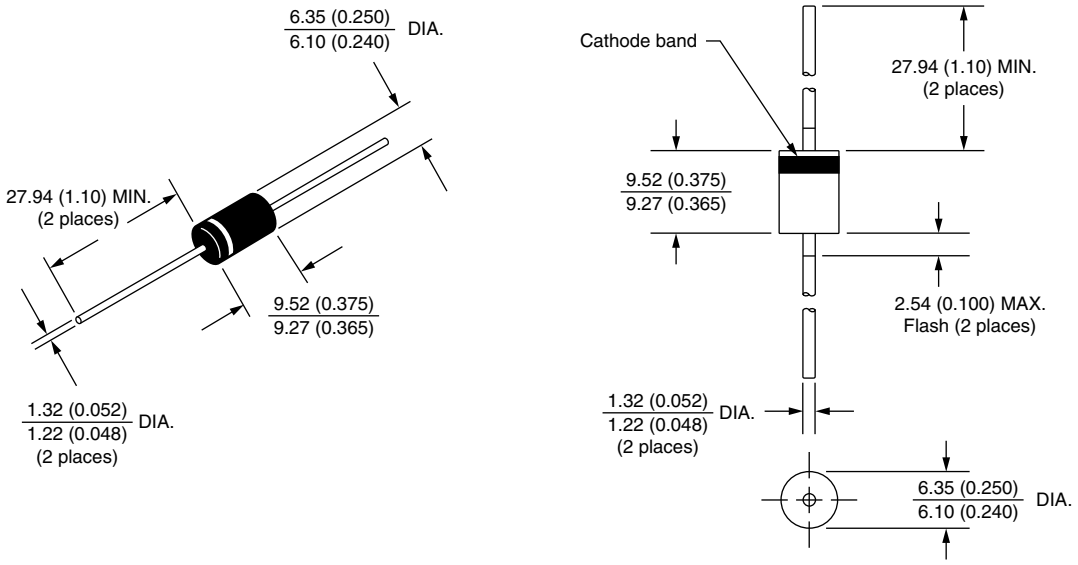
ORDERING INFORMATION (Example)

PREFERRED P/N	QUANTITY PER T/R	MINIMUM ORDER QUANTITY	PACKAGING DESCRIPTION
VS-90SQ030	300	300	Bulk
VS-90SQ030TR	1500	1500	Tape and reel
VS-90SQ030-M3	300	300	Bulk
VS-90SQ030TR-M3	1500	1500	Tape and reel
VS-90SQ035	300	300	Bulk
VS-90SQ035TR	1500	1500	Tape and reel
VS-90SQ035-M3	300	300	Bulk
VS-90SQ035TR-M3	1500	1500	Tape and reel
VS-90SQ040	300	300	Bulk
VS-90SQ040TR	1500	1500	Tape and reel
VS-90SQ040-M3	300	300	Bulk
VS-90SQ040TR-M3	1500	1500	Tape and reel
VS-90SQ045	300	300	Bulk
VS-90SQ045TR	1500	1500	Tape and reel
VS-90SQ045-M3	300	300	Bulk
VS-90SQ045TR-M3	1500	1500	Tape and reel

LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95243
Part marking information	www.vishay.com/doc?95325
Packaging information	www.vishay.com/doc?95332

Axial DO-204AR

DIMENSIONS in millimeters (inches)



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