

1N4765(A)-1N4774(A)

TEMPERATURE COMPENSATED ZENER DIODES

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

Characteristics	Values
Operating and storage temperature	-65 to +175°C
DC power dissipation	500mW @ 50°C
Power derating	4mW/°C above 50°C

$I_R = 10\mu\text{A}$ @ 25°C and $V_R = 6\text{V}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Part number	Zener voltage	Zener test current	Maximum dynamic impedance	Maximum voltage temperature stability	Temperature range	Effective temperature coefficient
	$V_Z @ I_{ZT}$ (Note 3)	I_{ZT}	ΔZ_{ZT} (Note 1)	V_{ZT} (Note 2)		
	Volts	mA	Ohms	mV		
1N4765	9.1	0.5	350	68	0 to 75	0.01
1N4765A	9.1	0.5	350	141	-55 to 100	0.01
1N4766	9.1	0.5	350	34	0 to 75	0.005
1N4766A	9.1	0.5	350	70	-55 to 100	0.005
1N4767	9.1	0.5	350	14	0 to 75	0.002
1N4767A	9.1	0.5	350	28	-55 to 100	0.002
1N4768	9.1	0.5	350	6.8	0 to 75	0.001
1N4768A	9.1	0.5	350	14	-55 to 100	0.001
1N4769	9.1	0.5	350	3.4	0 to 75	0.0005
1N4769A	9.1	0.5	350	7	-55 to 100	0.0005
1N4770	9.1	1.0	200	68	0 to 75	0.01
1N4770A	9.1	1.0	200	141	-55 to 100	0.01
1N4771	9.1	1.0	200	34	0 to 75	0.005
1N4771A	9.1	1.0	200	70	-55 to 100	0.005
1N4772	9.1	1.0	200	14	0 to 75	0.002
1N4772A	9.1	1.0	200	28	-55 to 100	0.002
1N4773	9.1	1.0	200	6.8	0 to 75	0.001
1N4773A	9.1	1.0	200	14	-55 to 100	0.001
1N4774	9.1	1.0	200	3.4	0 to 75	0.0005
1N4774A	9.1	1.0	200	7	-55 to 100	0.0005

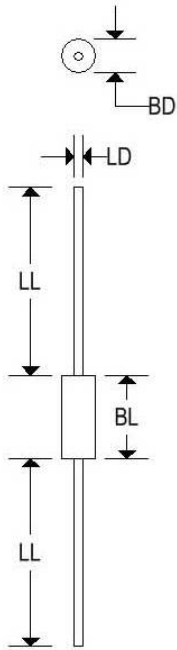
- Zener impedance is derived by superimposing on I_{ZT} a 60Hz rms ac current equal to 10% of I_{ZT}
- The maximum allowable change observed over the entire temperature range will not exceed the specified mV at any discrete temperature between the established limits
- Zener voltage range equals 9.1 volts $\pm 5\%$

1N4765(A)-1N4774(A)

TEMPERATURE COMPENSATED ZENER DIODES

MECHANICAL CHARACTERISTICS

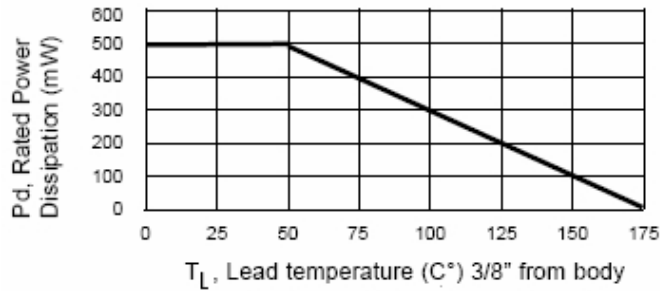
Case:	DO-35
Marking:	Body painted, alpha-numeric
Polarity:	Cathode band



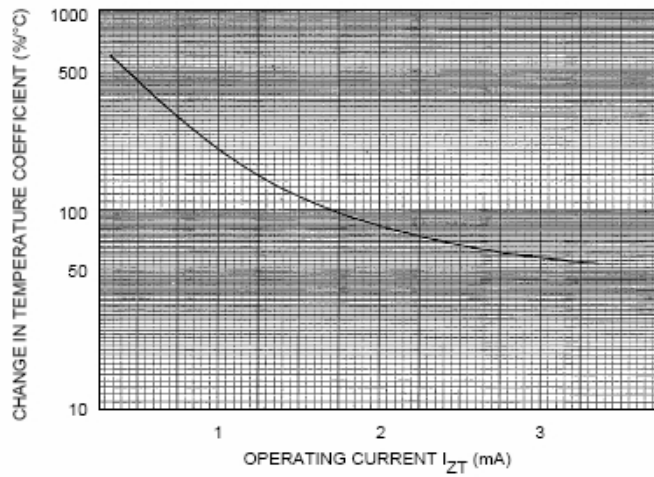
	DO-35			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.055	0.090	1.400	2.290
BL	0.120	0.200	3.050	5.080
LD	0.018	0.022	0.460	0.560
LL	1.000	1.500	25.400	38.100

1N4765(A)-1N4774(A)

TEMPERATURE COMPENSATED ZENER DIODES



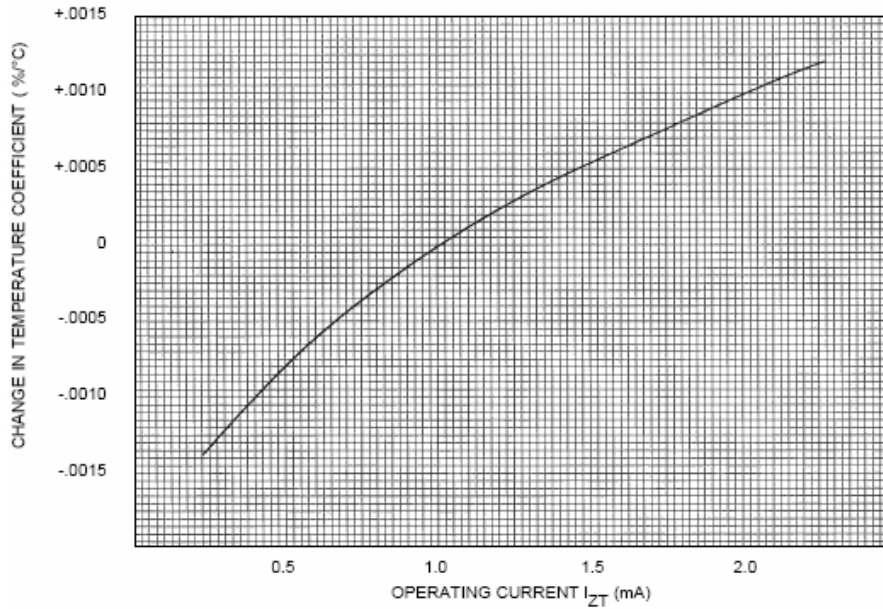
POWER DERATING CURVE



ZENER IMPEDANCE VS. OPERATING CURRENT

1N4765(A)-1N4774(A)

TEMPERATURE COMPENSATED ZENER DIODES



**TYPICAL CHANGE OF TEMPERATURE COEFFICIENT
WITH CHANGE IN OPERATING CURRENT**

1N4765(A)-1N4774(A)

TEMPERATURE COMPENSATED ZENER DIODES

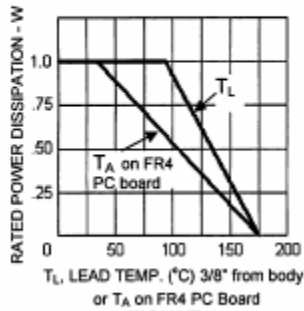


FIGURE 1
Power Derating Curve

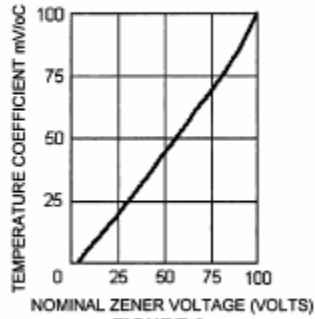


FIGURE 2
Temp. Coeff. vs. Zener Voltage

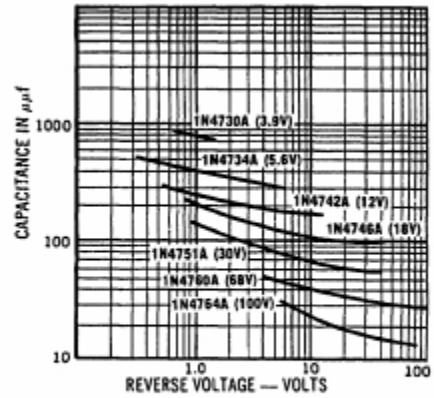


FIGURE 3
Capacitance vs. Voltage
for Representative Types