Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

LS4678 THRU LS4713

500mW Silicon Zener Diodes

Features

- Zener Voltage 1.8V-30V
- Very Sharp Reverse Characteristic
- VZ – tolerance ± 5%
- High Reliability
- Surface Mount Application

Mechanical Data

- Case: Double slug type, hermetically sealed glass
- Polarity: Cathode indicated by polarity band

Maximum Ratings

	Symbol	Value	Units
Max. Steady State Power Dissipation at T_L<75°C, Lead Length=3/8"	P_D	500	mW
Junction Temperature	T_J	200	
Storage Temperature Range	T_{STG}	-65 to 200	
Thermal Resistance(Junction to Ambient)	T_{thJA}	300	K/W

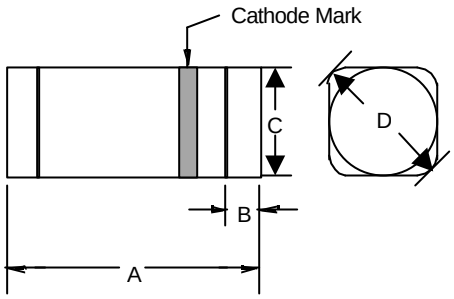
Electrical Characteristics @ 25°C Unless Otherwise Specified

	Symbol	Maximum	Unit
Max. Forward Voltage @ I_F=100mA	V_F	1.5	V

NOTE:

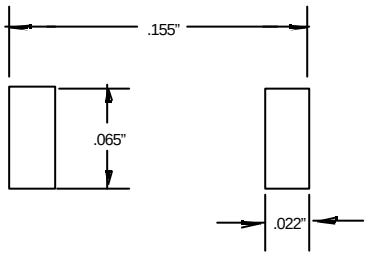
1) Some part number series have lower JEDEC registered ratings.

Quadro MELF



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.130	.146	3.30	3.70	
B	.008	.016	.20	.40	
C	.055	.063	1.40	1.60	∅
D	.067		1.70		

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics (T_L= 30°C Unless Otherwise Noted, VF=1.5V Max @ IF=100mA for all types)

Device [1]	Zener Voltage [2]				Leakage Current [3]		I_{ZM} [4]	φV_Z [5]
	V_Z (Volts)			@ I_{ZT}	I_R @ V_R			
	Min	Nom	Max	uA	uA Max	Volts	mA	Volts
LS4678	1.71	1.8	1.89	50	7.5	1.0	120	0.7
LS4679	1.90	2.0	2.10	50	5.0	1.0	110	0.7
LS4680	2.09	2.2	2.31	50	5.0	1.0	100	0.75
LS4681	2.28	2.4	2.52	50	2.0	1.0	95	0.8
LS4682	2.565	2.7	2.835	50	1.0	1.0	90	0.85
LS4683	2.85	3.0	3.15	50	0.8	1.0	85	0.9
LS4684	3.135	3.3	3.465	50	7.5	1.5	80	0.95
LS4685	3.42	3.6	3.78	50	7.5	2.0	75	0.95
LS4686	3.705	3.9	4.095	50	5.0	2.0	70	0.97
LS4687	4.085	4.3	4.515	50	4.0	2.0	65	0.99
LS4688	4.465	4.7	4.935	50	10	3.0	60	0.99
LS4689	4.845	5.1	5.355	50	10	3.0	55	0.97
LS4690	5.32	5.6	5.88	50	10	4.0	50	0.96
LS4691	5.89	6.2	6.51	50	10	5.0	45	0.95
LS4692	6.46	6.8	7.14	50	10	5.1	35	0.9
LS4693	7.125	7.5	7.875	50	10	5.7	31.8	0.75
LS4694	7.79	8.2	8.61	50	1.0	6.2	29	0.5
LS4695	8.265	8.7	9.135	50	1.0	6.6	27.4	0.4
LS4696	8.645	9.1	9.555	50	1.0	6.9	26.2	0.08
LS4697	9.50	10	10.5	50	1.0	7.6	24.8	0.1
LS4698	10.45	11	11.55	50	0.05	8.4	21.6	0.11
LS4699	11.40	12	12.6	50	0.05	9.1	20.4	0.12
LS4700	12.35	13	13.65	50	0.05	9.8	19	0.13
LS4701	13.30	14	14.7	50	0.05	10.6	17.5	0.14
LS4702	14.25	15	15.75	50	0.05	11.4	16.3	0.15
LS4703	15.20	16	16.8	50	0.05	12.1	15.4	0.16
LS4704	16.15	17	17.85	50	0.05	12.9	14.5	0.17
LS4705	17.10	18	18.9	50	0.05	13.6	13.2	0.18
LS4707	19.00	20	21	50	0.01	15.2	11.9	0.2
LS4711	25.65	27	28.35	50	0.01	20.4	8.8	0.27
LS4713	28.5	30	31.5	50	0.01	22.8	7.9	0.3

Note:

1) Tolerance and type number designation (V_Z)
   The type numbers listed have a standard tolerance of ±5% on the nominal zener voltage.C for 2% , D for 1%
2) Zener voltage (V_Z) measurement
   The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at 30°C ± 1°C and 3/8" lead length.
3) Reverse leakage current (I_R)
   Reverse leakage currents are guaranteed and measured at V_R shown on the table.
4) Maximum zener current rating (IZM)
   Maximum zener current ratings are based on maximum zener voltage of the individual units and JEDEC 250mW rating.
5) Maximum voltage change (φV_Z)
   Voltage change is equal to the difference between V_Z at 100uA and at 10uA

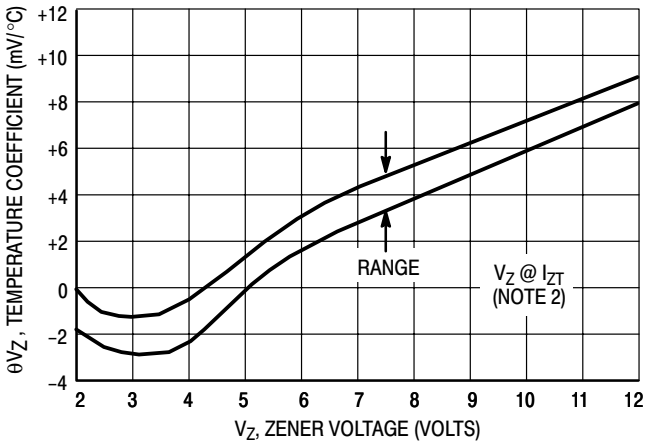


Figure 1. Range for Units to 12 Volts

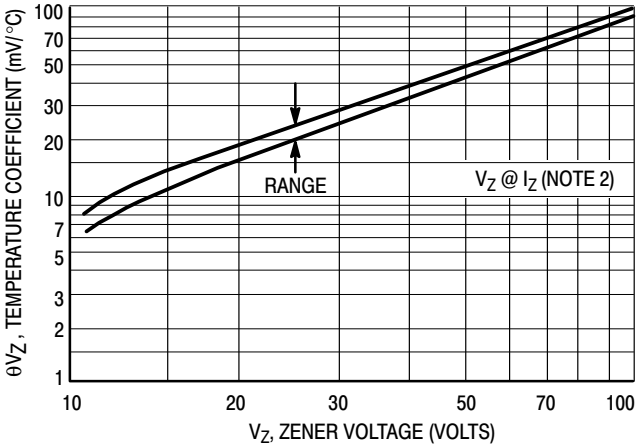


Figure 2. Range for Units 12 to 100 Volts

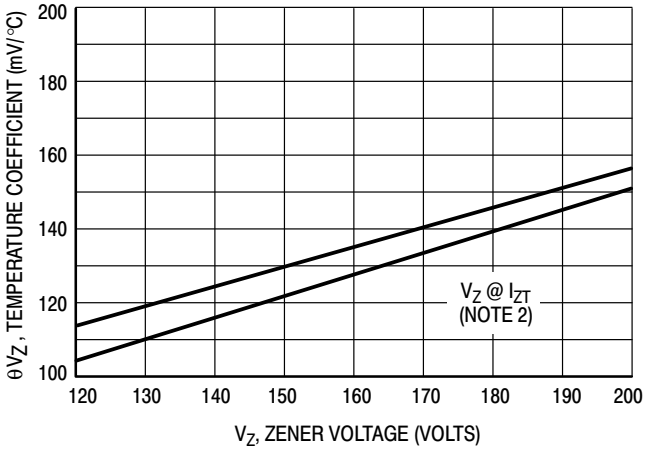


Figure 3. Range for Units 120 to 200 Volts

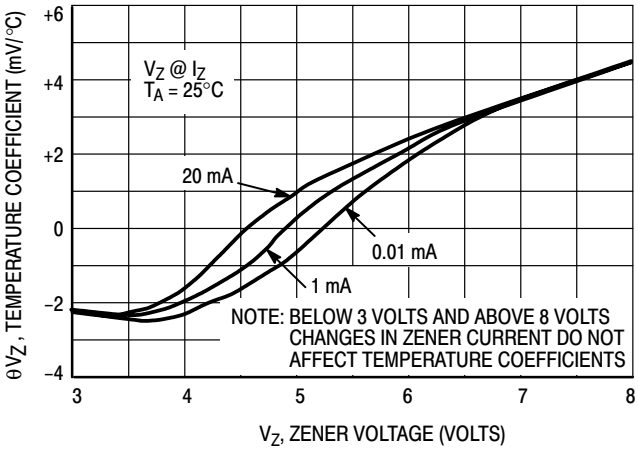


Figure 4. Effect of Zener Current

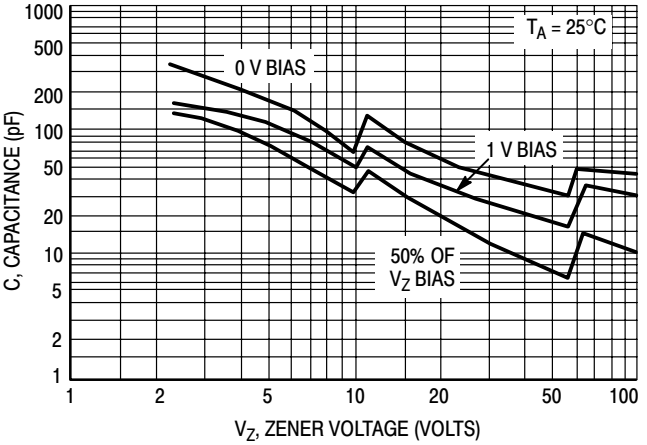


Figure 5. Typical Capacitance 2.4–100 Volts

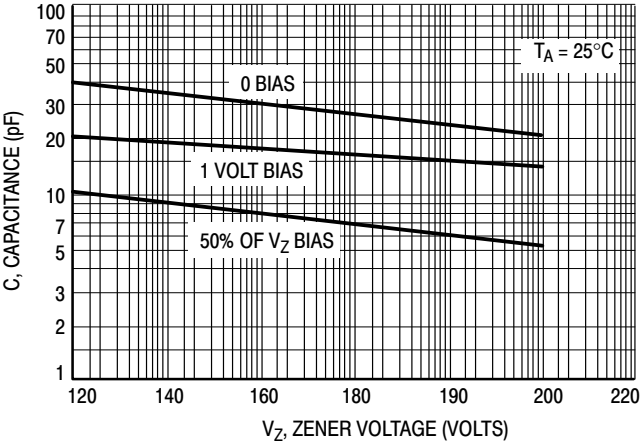


Figure 6. Typical Capacitance 120–200 Volts

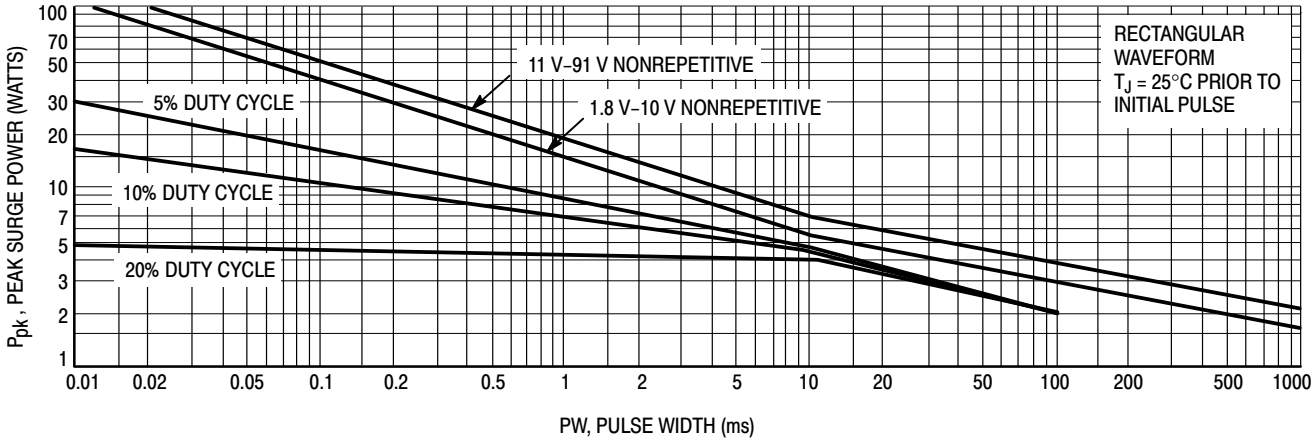


Figure 7. Maximum Surge Power 1.8–91 Volts

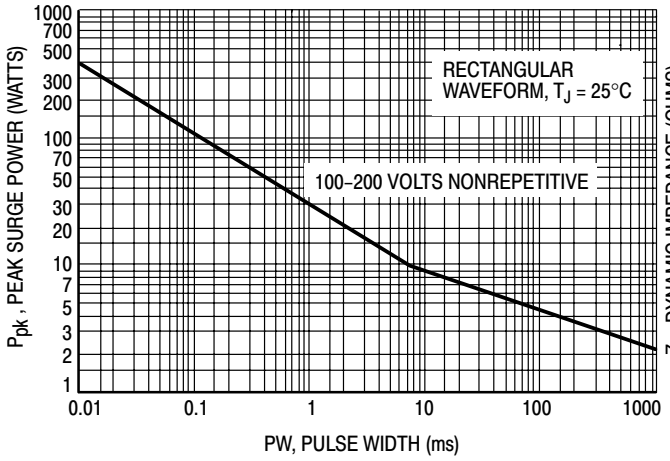


Figure 8. Maximum Surge Power DO-204AH 100–200 Volts

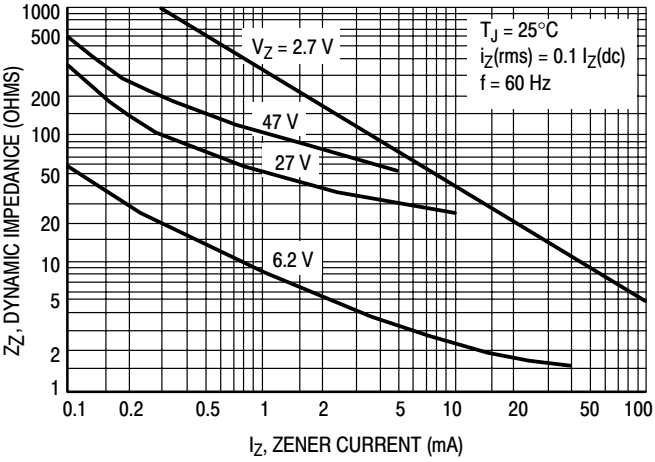


Figure 9. Effect of Zener Current on Zener Impedance

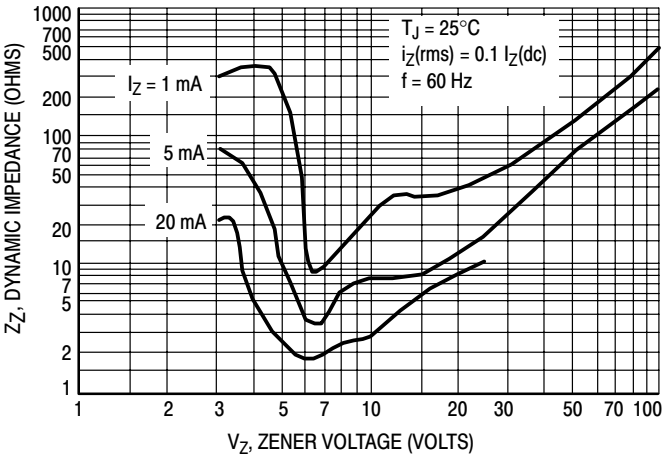


Figure 10. Effect of Zener Voltage on Zener Impedance

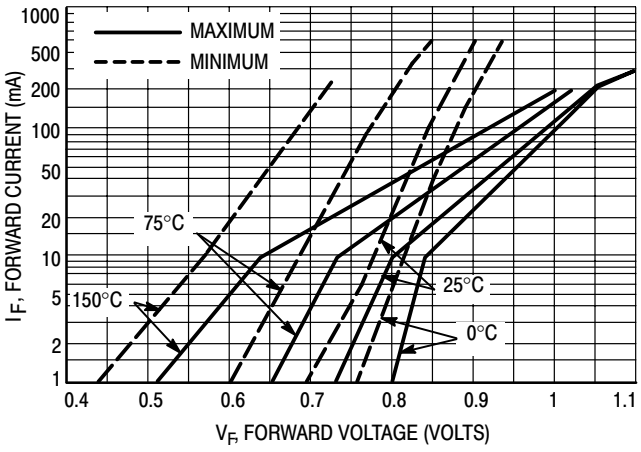


Figure 11. Typical Forward Characteristics

Micro Commercial Components

IMPORTANT NOTICE
Micro Commercial Components Corp . reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . *Micro Commercial Components Corp* . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp* . and all the companies whose products are represented on our website, harmless against all damages.
APPLICATIONS DISCLAIMER
Products offer by *Micro Commercial Components Corp* . are not intended for use in Medical, Aerospace or Military Applications.