

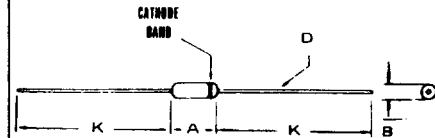
# ABRUPT - HYPERABRUPT UHF/VHF TUNING DIODES

SERIES  
ZC700 - ZC714, B, C,  
ZC800 - ZC899, A, B.

The abrupt ZC700 and hyperabrupt ZC800 series tuning diodes together offer a selection of characteristics that could fit many UHF/VHF applications. Where required the higher Q's of the ZC700's can be traded for the larger capacitance tuning ratios of the ZC800's. Each type can be matched, the ZC700's more closely than the ZC800's. Both series are highly reliable and designed to meet or exceed MIL-S-19500.

### GENERAL SPECIFICATIONS (25° unless otherwise noted)

Rating	Symbol	Value
Reverse Voltage	V <sub>R</sub>	As Specified
Reverse Voltage Leakage Current	I <sub>R</sub>	As Specified
Junction Temperature	T <sub>J</sub>	+175°C Max
Storage Temperature	T <sub>stg</sub>	-65°C to 200°C
Device Dissipation	PD	400 mW Max
Case Capacitance	CC	0.2 pf Typ
Series Inductance	LS	5 nH Typ



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.84	7.62	0.230	0.300
B	2.16	2.72	0.085	0.107
D	0.46	0.56	0.018	0.022
K	25.40		1.000	

DO - 7

### ELECTRICAL CHARACTERISTICS HYPERABRUPT

TYPE NO.	REVERSE VOLTAGE		REVERSE CURRENT		Fig. of Merit (Q) @ 3V/50 MHz
	V <sub>R</sub> = 25 Vdc Min @ 10 μA		I <sub>R</sub> = .02 μA Max @ 20 Vdc		
	Diode Cap. (CT) Typ @ 2V/1 MHz	Diode Cap. (CT)* ±20% @ 20V/1 MHz	Tuning Ratio (TR) C2/C20 @ 1 MHz	Min/Max	
ZC898	4.4	0.8	4.0/5.5	250	
ZC899	6.6	1.2	4.0/5.5	250	
ZC800	10	1.8	5.0/6.5	250	
ZC801	15	2.7	5.0/6.5	250	
ZC802	22	4.0	5.0/6.5	150	
ZC803	33	6.0	5.0/6.5	150	
ZC804	47	8.5	5.0/6.5	150	
ZC805	68	12.0	5.0/6.5	75	
ZC806	100	18.0	5.0/6.5	75	
ZC807	120	22.0	5.0/6.5	200**	
ZC808	175	32.0	5.0/6.5	150**	
ZC809	250	45.0	5.0/6.5	100**	

\*To order devices with CT Nom ±10% add Suffix A, ±5% add Suffix B

\*\* (Q) @ 3V, 20MHz

MATCHING - To order sets matched to ±3%, specify number of diodes per set and add Suffix M; i.e. for 3 matched diodes, add Suffix 3M, etc.

### ELECTRICAL CHARACTERISTICS ABRUPT

TYPE NO.	REVERSE VOLTAGE		REVERSE CURRENT		Fig. of Merit (Q) @ 4V/50 MHz
	V <sub>R</sub> = 30 Vdc Min @ 10 μA		I <sub>R</sub> = .02 μA Max @ 25 Vdc		
	Diode Cap. (CT)* ±10% @ 4V/1 MHz	Tuning Ratio (TR) C2/C30 @ 1 MHz	Min.	Min.	
ZC700	6.8	2.7:1	450		
ZC701	8.2	2.7:1	450		
ZC702	10.0	2.7:1	400		
ZC703	12.0	2.8:1	400		
ZC704	15.0	2.8:1	400		
ZC705	18.0	2.8:1	350		
ZC706	22.0	2.8:1	350		
ZC707	27.0	2.8:1	300		
ZC708	33.0	2.8:1	200		
ZC709	39.0	2.8:1	150		
ZC710	47.0	2.8:1	150		
ZC711	56.0	2.8:1	150		
ZC712	68.0	2.8:1	150		
ZC713	82.0	2.8:1	100		
ZC714	100.0	2.8:1	100		

\*To order devices with CT Nom ±5% add Suffix B, ±2% add Suffix C  
MATCHING - Tuning Ratio matched on ±0.1 on special order

