

## HERMETICALLY SEALED GLASS PACKAGED TUNING DIODES

## ABRUPT and HYPERABRUPT

ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25° C unless otherwise noted)

Diode Cap. (CT) <sup>*</sup> ±10% @ 4V/1 MHz pF	GENERAL APPLICATIONS			LOW INDUCTANCE FOR USE TO 2.5 GHz			MINIATURE GLASS VERY HIGH Q			VERY HIGH Q PREDICTABLE TRACKING			GENERAL PURPOSE			
	TYPE NO.	RATIO C <sub>2</sub> /C <sub>20</sub> min/typ	Q <sub>4</sub> @ 50 MHz	TYPE NO.	RATIO C <sub>2</sub> /C <sub>20</sub> min/max	Q <sub>4</sub> @ 50 MHz min	TYPE NO.	RATIO C <sub>2</sub> /C <sub>30</sub> min/typ	Q <sub>4</sub> @ 50 MHz min	TYPE NO.	RATIO C <sub>2</sub> /C <sub>30</sub> min/typ	Q <sub>4</sub> @ 50 MHz min	TYPE NO.	RATIO C <sub>4</sub> /C <sub>25</sub> min/typ	Q <sub>4</sub> @ 50 MHz	pF
1.8																1.8
2.2																2.2
2.7																2.7
3.3																3.3
3.9																3.9
4.7																4.7
5.6																5.6
6.8																6.8
8.2																8.2
10.0																10.0
12.0																12.0
15.0																15.0
18.0																18.0
20.0																20.0
22.0																22.0
27.0																27.0
33.0																33.0
39.0																39.0
47.0																47.0
56.0																56.0
68.0																68.0
82.0																82.0
100.0																100.0
VR (min)	20 Vdc @ IR - 10 uAdc			25 Vdc @ IR - 10 uAdc			30 Vdc @ IR - 10 uAdc			30 Vdc @ IR - 10 uAdc			30 Vdc @ IR - 10 uAdc			
IR (max)	0.1 uAdc @ VR - 15 Vdc			0.5 uAdc @ VR - 20 Vdc			0.02 uAdc @ VR - 25 Vdc 2.0 uAdc @ TA - 150°C			0.02 uAdc @ VR - 25 Vdc 2.0 uAdc @ TA - 150°C			0.2 uAdc @ VR - 25 Vdc			
TCC1	300 ppm/°C			300 ppm/°C			300 ppm/°C			300 ppm/°C			300 ppm/°C			
Case	DO 7			DO 35			Miniature DO 7			DO 7			DO 7			

### 15 & 20 VOLTS

Diode Cap. (CT) <sup>*</sup> 4V/1 MHz ± 10% pF	TYPE NO.	RATIO C <sub>2</sub> /C <sub>20</sub> typ	Q <sub>4</sub> @ 20 MHz min	15 & 20 VOLTS		
				TYPE NO.	RATIO C <sub>2</sub> /C <sub>20</sub> typ	Q <sub>4</sub> @ 20 MHz min
120.0	MV1652	2.6	250			
150.0	MV1654	2.6	250			
180.0	MV1656	2.6	200			
200.0	MV1658	2.6	200			
220.0	MV1660	2.6	150			
250.0	MV1662 <sup>3</sup>	2.3	150			
270.0	MV1663	2.3	100			
330.0	MV1663	2.3	100			
VR (min)	20 Vdc @ IR - 10 uAdc MV1652/60 15 Vdc @ IR - 10 uAdc MV1662/66					
IR (max)	0.1 uAdc @ VR - 15 Vdc MV1652/60 0.1 uAdc @ VR - 10 Vdc MV1662/66					
TCC	300 ppm/°C					
Case	DO-14					

<sup>\*</sup>Total Diode Capacitance measured at 1 MHz and VR specified.  
To order devices with CT Nom ± 5.0% or ± 2.0% add Suffix B or C respectively.

- (1) Capacitance Temperature Coefficient (typ) @ 4V/1 MHz
- (2) For SQ1716, C4 - 3 pf. nom.
- (3) Tuning Ratio @ C2/C15 for MV1662/66.

### GENERAL SPECIFICATIONS

(25° C unless noted)

RATING	SYMBOL	VALUE
Reverse Voltage	VR	As SPECIFIED
Junction Temperature	T <sub>j</sub>	+175°C Max
Storage Temperature	T <sub>stg</sub>	-65°C to 200°C
Linear Power Derating		4 mW/°C
Device Dissipation (mW Max)	PD	400 250 400 500
Case Capacitance (pf Typ)	CC	0.10 0.15 0.2 0.3
Series Inductance (nhy Typ)	LS	1.5 3.0 5.0 5.0

### PACKAGE CHARACTERISTICS

DIM	DO-35		Min DO-7		DO-7		DO-14	
	Min	Max	Min	Max	Min	Max	Min	Max
L		.180	.0150	.0176		.0300		.0300
M	1.00		1.000		1.000		1.000	
N	0.019	0.021	0.014	0.016	0.019	0.021	0.019	0.021
O	.075	.085	0.068	0.076	0.092	0.104	0.108	0.140

All dimensions in inches, to convert to millimeters, multiply by 25.4

For other types not listed here, please contact your representative or the factory with your requirements.

SECTION 4