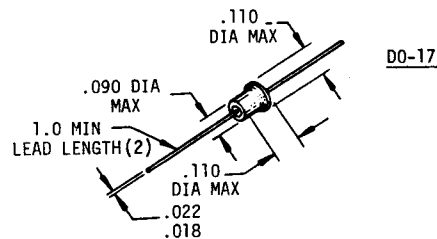


# SEMICONDUCTOR DEVICE, DIODE (CONT)

## TUNNEL

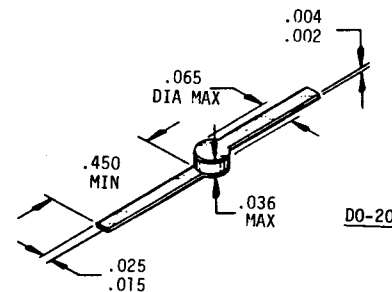
$I_p$ (mA)	C MAX (pF)	CASE STYLE	PART NUMBER	** ND	CC	++ RC
1 ± .1	10	D0-17	Δ152-0169-00	N	L+	
1 ± .025	5	D0-17	Δ152-0181-00	N	L+	4D
4.7 ± .12	18	D0-17	Δ152-0125-00	N	L+	4F
4.7 ± .12	18	D0-17	Δ152-0125-01	N	L+	4G
5.025 ± .275	7	D0-17	Δ152-0310-00	N	N+	
10 ± 1	90	D0-17	Δ152-0098-00	N	M	
10 ± .25	50	D0-17	Δ152-0182-00	N	M+	
10 ± 1	25	D0-17	Δ152-0386-00	N	L+	
10 ± 1	8	D0-17	Δ152-0140-01	N		
10 ± 1	2.4	D0-17	Δ152-0177-01	N	M+	
10 ± .5	2.4	D0-17	Δ152-0177-02	N	N-	4H
18.9 ± 2.1	1.5	D0-20	Δ152-0329-00	N	O+	
50.75 ± 5.75	$t_r$ 31 pS	Special	Δ152-0383-00	N	O+	



D0-17

## BACK

FOR I MAX	REV I MAX	REC TIME	CASE STYLE	PART NUMBER	** ND	CC	++ RC
5μA	5mA	0.4 ns	D0-7	152-0070-00	N	L+	2I



D0-20

## SHOCKLY, FOUR LAYER

$V_S$	$I_F$ (A)	MAX $I_S$ (μA)	$I_H$ (mA)	MIN $I_{rb}$ (V)	MAX $I_{LK}$ (μA)	OTHER	CASE STYLE +	JEDEC OR VENDOR NO.	PART NUMBER	** ND	CC	++ RC
18 - 22	10	125	10 - 20	22	15	4 Layer	D0-7	1N3831 Fmly	152-0136-00	N		
28 - 36	2	100		28	10	3 Layer	T0-92	MPT32	152-0401-00	N	G-	4F
46 - 54	10	125	15 - 30	30	15	4 Layer	D0-7	4EX264	152-0108-00	U	L	

## VOLTAGE VARIABLE CAPACITANCE (VVC)

$C_4$ NOM pF	TOL. %	QUALITY FACTOR			BRKDN MIN VOLTS	LEAKAGE CURRENT		CASE STYLE +	JEDEC OR VENDOR NO.	PART NUMBER	** ND	ΔΔ MID	CC	++ RC
		MIN Q	$V_R$ (V)	f (MHz)		MAX (μA)	@ $V_R$ (V)							
1.	20	325	4	1	30	.02	25	Chip	MV1C2097	152-0679-00	A		I-	
1.2	10	2400	30	50	30	.02	25	D0-35	GC-105	152-0738-00	A		M+	
1.5	20	2400	4	50	45	.02	35	Microstrip	DVH-6934-98	152-0722-00	N		N	
6.8	10.3	300	4	100	60	.5	48	Pill	MV1864D	152-0272-00	A		M+	3H
7.	14.3	3	4	50	100	.1	100	D0-7	V7EA	152-0358-00	N			
7.	10	50	4	50	25	.5	25	D0-7	PG1084	152-0422-00	A		H-	
7.05	6.4	4000	4	50	60	.06	60	Pill	8C2070	152-0684-00	N			
10.	20	3.5	4	50	100	.1	100	D0-7	C33-4001	152-0271-00	A		J+	
11.5		225		100	30	.5	28	A276	BB105B	152-0650-00	A		H-	
17.5	15	15	4	50	50	.030	45	D0-7	1N4806 Fmly	152-0612-00	A		J-	
33.	20	55	4	50	35	1.0	30	D0-7	SMV1263	152-0269-00	A	✓	H-	4D
33.	5	55	4	50	35	1.0	30	D0-7	SMV1263	152-0269-01	A	✓	H	
61.6	9	7	4	50	40	.1	40	D0-7	V56 Fmly	152-0270-00	A		J+	
100.	5	175	4	50	30	.02	25	D0-7	1N5456B	152-0719-00	A		J+	
120.	20	200	2	1	12	.1	10	D0-7	MV1404	152-0595-00	A		L	2I
(@ 2V, Hyperabrupt Junction)														
155.	5.2	70	4	50	22	.010	10	D0-7	V34-4202	152-0578-00	A		M+	3F
(Hyperabrupt Junction)														
155.	10	70	4	50	15	.02	10	D0-7	V34-4204	152-0622-01	A		L	IJ
155.	10	70	4	50	15	.5	10	D0-7	V34-4203	152-0622-00	A		L-	
330.	10	300	8	20	50	.3	45		PQ-1046	152-0597-00	A		M-	
29 @ 3V	10.3	280	3	50	30	.1	28	A276	BB109G	152-0665-00	A		G+	
500 @ 1V	12	150	1	1	18	.1	15	T0-92	SMV1361	152-0673-00	A		I	

# SEMICONDUCTOR DEVICE, DIODE (CONT)

## SNAP-OFF

SNAP TIME (pS)	MINORITY CARRIER LIFETIME		MIN BRKDN VOLTS (V)	TOTAL CAPACITANCE			CASE STYLE +	JEDEC OR VENDOR NUMBER	PART NUMBER	** ND	CC	++ RC
	MIN (nS)	MAX (nS)		MIN (pF)	MAX @ V <sub>R</sub> (pF)	(V)						
70 max	10		15		.5	10	U10	8ND1571	152-0741-00	A	M+	
100 max	17		30	1.5	2.1	0	D0-35	GC-2534-15	152-0252-01	A	L	
120 max	60	15	30	.45	1.10	10	Chip	A4X618	152-0506-00	A	K+	
140 max	10	50	10	.38	.58	6	F111	MA43677	152-0451-00	A	O	3H
150 max	20	100	35		.9	0	D0-35	A4X583	152-0335-01	A	L-	
150 max	21		40	.85	1.15	6	U10	GC-2544-00	152-0678-00	A	L	
500 max	150	250	35	2.5	10.	0	D0-35	5082-8872	152-0503-00	A	K	
500 max	150	200	35	2.5	10.	0	D0-35	QSRD-4866	152-0503-01	A	L	

## TRANSIENT VOLTAGE SUPPRESSORS

ENERGY (JOULES)	STAND OFF V	V <sub>BR</sub>	MAX V <sub>CLAMP</sub>	MAX I <sub>R</sub> AT STAND OFF V	+CASE STYLE	JEDEC OR VENDOR NUMBER	PART NUMBER	** ND	CC	++ RC
1.5	11.1	13 ± 5% at 1mA	18.2 at 82A	5µA	A1ey	TVP1505A	152-0761-00	A	J-	
1.5	171	200 ± 10% at 1mA	274 at 5.5A	5µA	A1ey	1N6303A	152-0599-00	A	I+	
5	45	55 ± 10% at 5mA	80.3 at 62A	10µA	A1gq	5KP45	152-0788-00	A	K-	4H

## ARRAYS (DIODE)

VENDOR NUMBER	PART NUMBER	** ND	CC	++ RC	DESCRIPTION	CASE STYLE +
FSA2619P	156-1540-00	A	J+		8-diode array	16 DIP
FSA2720M	156-1545-00	A	K-		7-diode array	14 DIP
CA3039	156-0106-00	N	J-	4F	6-diode array	MOD T0-101
CA3039	156-0106-01	N	I		100% tested	
CA3141E	156-1450-00	N	G+	3F	10-diode array	16 DIP

## PIN

TYPE	ON R <sub>S</sub>			MAX OFF C		CASE STYLE +	VENDOR NUMBER	PART NUMBER	** ND	CC	++ RC
	MIN (Ω)	MAX (Ω)	@ I <sub>F</sub> (mA)	C @ V <sub>R</sub> (pF)	(V)						
ATTENUATING	25	50	1	.4	50	D0-35	MA47690	152-0524-00	A	J-	
ATTENUATING		2.5	100								
ATTENUATING		8	20	.4	0	A196p	UM6601B	152-0579-00	A	K-	
ATTENUATING		2.5	100								
SWITCHING		.6	10	2.	20	D0-35	5082-3188	152-0728-00	A	F+	
SWITCHING		1.6	100	.2	50	Chip	5082-0012	152-0643-00	A	K	

+ CASE DRAWINGS CAN BE FOUND ON PAGES 13-14 thru 13-16.

\*\* NEW DESIGN CODE RECOMMENDATION FROM COMPONENT ENGINEERING:

A = Acceptable  
 N = Not Recommended  
 U = Unidentified

ΔΔ PURCHASED ON TAPE AND REEL FROM MACHINE INSERTION

### ++ CATALOG RELIABILITY CODES

USAGE/YR	CODE	FAILURE FREQ	CODE	%/YR (median)
≥10	1	1/100 000	A	.001
≥100	2	1/50 000	B	.002
≥1 000	3	1/20 000	C	.005
≥10 000	4	1/10 000	D	.01
≥100 000	5	1/5 000	E	.02
≥1 000 000	6	1/2 000	F	.05
≥10 000 000	7	1/1 000	G	.1
		1/500	H	.2
		1/200	I	.5
		1/100	J	1.0



**STATIC SENSITIVE**

THIS APPLIES TO ALL DEVICES ON THIS PAGE WITH Δ BY PART NUMBER. (See PAGE 10-0 FOR EXPLANATION.)

For further explanation of this code, see page 13-18.

# SEMICONDUCTOR DEVICE, DIODE (CONT)

## DO NOT USE IN NEW DESIGN

### TUNNEL

PART NUMBER	VENDOR NUMBER	§§ STATUS	OTHER	CASE STYLE	I <sub>p</sub> (mA)	C MAX (pF)
152-0041-00	XFTA510	NP	Germanium	T0-18	10	6
152-0043-00	1N3129	NP	Germanium	M-83	20	20
152-0063-00	1N2941	NP	Germanium	T0-18	4.7	50
152-0073-00	SMTD604	DL	Germanium	M-83	10	25
152-0074-00	1N3128	NP	Germanium	M-83	5	15
152-0078-00	1N3130	CR	Germanium	M-83	50	25
152-0081-00	1N3714	NP	Germanium	A82	2.2	25
152-0093-00	STD736	CS	Germanium	D0-17	4.7	50
152-0099-00	TD1081	NP	Germanium	M-83	50	6
152-0102-00	STD615	OB	Germanium	A82	10	28
152-0140-00	1N3848	NP	Germanium	M-83	10	25
152-0154-00	TD253	NP	Germanium	M-214	10	9
152-0155-00	TD202	NP	Germanium	D0-20	2.2	5
152-0156-00	37181	NP	Germanium	D0-20	4.7	8
152-0159-00	37181	NP	Germanium	M-83	20	4
152-0189-00	1N3712	DL	Germanium	A82A	1	10
152-0203-00	32623	NP	Germanium	M-83	20	4
152-0214-00	TD252	NP	Germanium	D0-18	4.7	6
152-0225-00	TD256	CM	Germanium	M-214	100	6
152-0253-00	SMTD714	DL	Germanium		50	5
152-0254-00	SMTD716	OB	Germanium		100	6
152-0254-01	SMTD716	OB	Germanium with Ground Spring		100	6
152-0266-00	TD256	DL	Germanium	M-214	100	35
152-0275-00	SMTD907	CS	Germanium		50	5
152-0276-00		NP				
152-0277-00	37650, 1N3851	NP	Germanium	M-83	100	40
152-0330-00	STD930	CS	Germanium		2.2	25
152-0332-00		DL				
152-0334-00	152-0099	NP	Germanium with Ground Spring	M-83	50	6
152-0334-01		OB	Germanium with Ground Spring		50	6
152-0365-00	TD1081	NP	Germanium		50	6
152-0371-00	152-0371-00	DL	Germanium	A239	10	8
152-0373-00	STD932	CS	Germanium	D0-17	4.7	50
152-0375-00	SMTD908	CS	Germanium	D0-17 or D0-20	100	40
152-0376-00		DL	Germanium	A239	5	7
152-0377-00	SMTD636	DL	Germanium		50	1
152-0378-00	TD717	DL	Germanium	A239	4.7	25
152-0379-00	SMTD912	CS	Germanium	D0-17	20	10
152-0380-00	38820	CS	Germanium	A239	20	10
152-0381-00	38769	CS	Germanium	A239	5	15
152-0382-00	SMTD	DL	Germanium		50	3
152-0387-00	SMTD914	CR	Germanium	D0-17	20	4.5
152-0402-00	STD931	OT	Germanium	D0-17	2.2	25
152-0507-00	SMTD961	DL	Germanium inserted & epoxied in holder		50.7	1.2
153-0021-00	152-0078-00	DL	Germanium with matched shunt resistor		50	25
153-0042-00		CR	Checked, Diode/Resistor Pair			
153-0043-00	153-0036	NP	Checked with Ground Spring			
153-0043-01	153-0036	CS	Checked			

### BACK

PART NUMBER	VENDOR NUMBER	§§ STATUS	OTHER	CASE STYLE
152-0077-00	BD-1	NP	Germanium	A8

### SHOCKLY, FOUR LAYER

PART NUMBER	VENDOR NUMBER	§§ STATUS	OTHER	CASE STYLE
152-0204-00	4E20	DL	Replaced by 152-0136-00	A71

### VOLTAGE VARIABLE CAPACITANCE(VVC)

PART NUMBER	VENDOR NUMBER	§§ STATUS	CASE STYLE	C <sub>4</sub> NOM pF	TOL. %	QUALITY FACTOR			BREAKDOWN MIN VOLTS	LEAKAGE CURRENT	
						MIN Q	V <sub>R</sub>	f MHz		MAX μA	@ V <sub>R</sub>
152-0187-00	KV4803	CS	D0-14	10	20	100	4	50	100	.1	100
152-0230-00	SMV8135	LS	P111	6.8	9.7	300	4	100	60	.5	48
152-0231-00	1N5144 Fmly	OT	D0-7	22	10	200	4	50	60	.5	48
152-0271-01	PG-1155	OT	A276	11	±1pF	225		50	30	.5	28
152-0455-00		EN		13	8						