

## SMALL SIGNAL PIN DIODES

### FOR RF SWITCHING

- Low Series Resistance
- Low Capacitance
- Low Insertion Loss
- High Isolation

### FOR RF ATTENUATING

- Controlled Series Resistance
- Low Capacitance
- Low Distortion
- Wide Dynamic Range

### DESCRIPTION

These general purpose PIN diodes are intended for low power RF applications. Switching diodes are tailored for applications such as duplexers, antenna switching matrices, digital phase shifters, time multiplex filters, band switching, and TR or ATR switching. Attenuating diodes function as current controlled resistors when forward biased and are specified for use in control applications such as variable RF attenuators, automatic gain control circuits, RF modulators, analog phase shifters, RF limiters, and power levelers.

### PIN RF SWITCHING DIODES-ELECTRICAL SPECIFICATIONS at $T_A = 25^\circ\text{C}$

MODEL NUMBER	DIODE CAPACITANCE $f = 1.0 \text{ MHz}$		SERIES RESISTANCE $f = 100 \text{ MHz}$		EFFECTIVE MINORITY CARRIER LIFETIME (nSec) $I_F = 10 \text{ mAdc}$ $I_R = 50 \text{ mA}$	$V_{BR}$ REVERSE BREAKDOWN VOLTAGE $I_R = 10 \mu\text{A}$ (MIN)	REVERSE LEAKAGE CURRENT		FORWARD VOLTAGE		PACKAGE	CATHODE STRIPE
	$C_T$ (pF) TYP/MAX	$V_R$ (Vdc)	$R_S$ (Ohms) TYP/MAX	$I_F$ (mA)			$I_R$ (nA) (MAX)	$V_R$ (Vdc)	$V_F$ (Vdc)	$I_F$ (mA)		
KS3542	0.8/1.2	3	0.6/0.7	3	100	35	100	20	1.2	100	DO-34	BLACK
KS3543	0.7/1.0	3	0.8/1.2	3	100	35	100	20	1.2	100	DO-34	BLACK
KS9301	0.17/0.25	50	0.85/1.0	100	100	200	-	-	1.2	100	15	SILVER
KS9302	0.17/0.2	50	0.85/1.0	100	100	300	-	-	1.2	100	15	SILVER
KS9339	0.21/0.25	50	0.85/1.25	100	100	150	-	-	1.2	100	15	SILVER
KS9342	0.25/0.4	20	0.6/1.0	20	15	70	-	-	1.2	100	15	SILVER
KS9343	0.25/0.4	20	0.6/1.0	20	15	50	-	-	1.2	100	15	SILVER
KS9377	0.21/0.3	50	0.85/1.5	100	100	200	-	-	1.2	100	15	SILVER

### PIN RF ATTENUATING DIODES-ELECTRICAL SPECIFICATIONS $T_A = 25^\circ\text{C}$

MODEL NUMBER	DIODE CAPACITANCE $f = 1.0 \text{ MHz}$		SERIES RESISTANCE $F = 100 \text{ MHz}$						EFFECTIVE MINORITY CARRIER LIFETIME (nSec) $I_F = 50 \mu\text{A}$ $I_R = 250 \text{ mA}$ TYP	$V_{BR}$ REVERSE BREAKDOWN VOLTAGE $I_R = 10 \text{ mA}$ MIN	REVERSE LEAKAGE CURRENT		FORWARD VOLTAGE		PACKAGE	CATHODE STRIPE
			HIGH		LOW		RESIDUAL				$I_R$ (nA) MAX	$V_R$ (Vdc)	$I_F$ (mA)			
	$C_T$ (pF) TYP/MAX	$V_R$ (Vdc)	$R_S$ (Ohms) MIN/MAX	$I_F$ (mA)	$R_S$ (Ohms) MIN/MAX	$I_F$ (mA)	$R_S$ (Ohms) TYP/MAX	$I_F$ (mA)								
KS8303	0.12/0.3	50	920/1380	0.01	16/24	1.0	-/1.5	100	0.1	100	-	-	-	-	15	SILVER
KS8304	0.21/0.3	50	690/1040	0.01	12/18	1.0	-/1.5	100	0.1	100	-	-	-	-	15	SILVER
IN5767	0.3/0.4	50	1000/2500T	0.01	5T/8	20	1.5/2.5	100	1.0	100	1000	50	1.0	100	15	SILVER
KS8380	0.3/0.4	50	1500/3000T	0.01	5T/8	20	1.5/2.5	100	-/1.3	100	-	-	-	-	15	SILVER
KS8381	0.3/0.4	50	1500/3000T	0.01	6T/8	20	2/3.5	100	-/2.0	100	-	-	-	-	15	SILVER

### RATINGS

Operating Temperature:  $-55^\circ\text{C}$  to  $+150^\circ\text{C}$   
Storage Temperature:  $-65^\circ\text{C}$  to  $+200^\circ\text{C}$