T-07-15

SMALL SIGNAL PIN DIODES

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.

FEATURES

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

PIN RF SWITCHING DIODES – ELECTRICAL SPECIFICATIONS $T_A = 25°C$

MODEL NUMBER	DIODE CAPACITANCE f = 1.0 MHz		SERIES RESISTANCE f = 50 MHz		EFFECTIVE MINORITY CARRIER LEFETIME (µSEC) IF = 10 mAdc IF = 2 mAdc TYP	VBR REVERSE BREAKDOWN VOLTAGE IR = 10mAdc MIN	REVERSE LEAKAGE CURRENT		FORWARD VOLTAGE		PACKAGE	CATHODE STRIPE
	C_T (pF) TYP/MAX	V_R (Vdc)	R_S (ohms) TYP/MAX	I_F (mAdc)			I_R (nAdc) MAX	V_R (Vdc)	V_F (Vdc) MAX	I_F (mAdc)		
KS3542	0.8/1.2	3	0/6/0.7	3	0.1	35	100	20	1 2	100	DO-34	BLACK
KS3543	0.7/1.0	3	0.8/1.2	3	0.1	35	100	20	1 2	100	DO-34	BLACK
KS9301	0.17/0.25	50	0.85/1.0	100	0 1	200	–	–	1 2	100	15	SILVER
KS9302	0.17/0.2	50	0.85/1.0	100	0.1	300	–	–	1.2	100	15	SILVER
KS9339	0.21/0.25	50	0.85/1.25	100	0.1	150	–	–	1 2	100	15	SILVER
KS9342	0.25/0.4	20	0.6/1.0	20	0 015	70	–	–	1 2	100	15	SILVER
KS9343	0.25/0.4	20	0.6/1.0	20	0.015	50	–	–	1.2	100	15	SILVER
KS9377	0.21/0.3	50	0.85/1.5	100	0.1	200	–	–	1 2	100	15	SILVER

PIN RF ATTENUATING DIODES – ELECTRICAL SPECIFICATIONS $T_A = 25°C$

MODEL NUMBER	DIODE CAPACITANCE f = 1.0 MHz		SERIES RESISTANCE f = 50 MHz						EFFECTIVE MINORITY CARRIER LEFETIME (µSEC) IF = 50 mAdc IF = 250 mAdc TYP	VBR REVERSE BREAKDOWN VOLTAGE IR = 10 mAdc MIN	REVERSE LEAKAGE CURRENT		FORWARD VOLTAGE		PACKAGE	CAPTHODE STRIPE
			HIGH		LOW		RESIDUAL									
	C_T (pF) TYP/MAX	V_R (Vdc)	R_S (ohms) MIN/MAX	I_F (mAdc)	R_S (ohms) MIN/MAX	I_F (mAdc)	R_S (ohms) TYP/MAX	I_F (mAdc)			I_R (nAdc) MAX	V_R (Vdc)	V_F (Vdc) MAX	I_F (mAdc)		
KS8303	0.21/0.3	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	1500/3000 T	0.01	5T/8	20	1.5/2.5	100	–/1.3	100	–	–	–	–	15	SILVER
KS8381	0.3/0.4	50	1500/3000 T	0.01	6T/8	20	2/3.5	100	–/2.0	100	–	–	–	–	15	SILVER

T - Typical

RATINGS

Operating Temperature: -55°C to +150°C

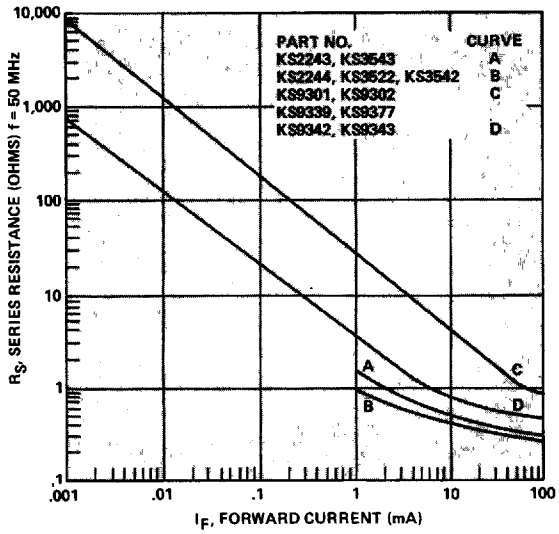
Storage Temperature -65°C to +200°C

CONTROL DEVICES

SMALL SIGNAL PIN DIODES

TYPICAL ELECTRICAL CHARACTERISTICS

PIN RF SWITCHING DIODES



PIN RF SWITCHING DIODES