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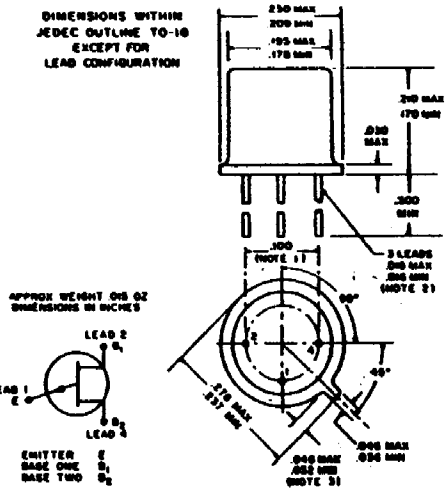
Silicon Complementary Unijunction Transistor

D5K1



absolute maximum ratings: (25° C free air)

	D5K1	
Voltage		
Interbase Voltage	30	V
Current (Note 2)		
Average Emitter (Forward)	150	mA
Peak Emitter (Forward)	2	A
Peak Reverse Emitter	15	mA
Power		
Average Total	300	mW
Temperature		
Operating	−55 to +150	°C
Storage	−55 to +200	°C

electrical characteristics: (25° C free air)

		Min.	Typ.	Max.	
Intrinsic Standoff Ratio	η	0.58	0.60	0.62	
Peak Point Voltage					
(V_{BB} = 5V)	V_P	3.2	3.45	3.7	Volts
(V_{BB} = 10V)	V_P	6.1	6.45	6.8	Volts
Interbase Resistance					
(I_{BB} = 0.1mA)	R_{BB0}	5.5	6.8	8.2	kohms
Emitter Breakdown Voltage					
(I_{EB1} = 10μA)	V_{EB1O}	8.0	9.5		Volts
Peak Point Current					
(V_{BB} = 10V)	I_P			5	μA
Valley Point Current					
(V_{BB} = 10V)	I_V	1	2		mA
Emitter Reverse Current					
(V_{EB1} = 5V)	I_{EB1O}		0.1	10	nA
Emitter Saturation Voltage					
(I_E = 50mA, V_{BB} = 10V)	$V_{E(sat)}$		1.1	1.5	Volts
Modulated Interbase Current					
(I_E = 50mA, V_{BB} = 10V)	$I_{B2(mod)}$		4	10	mA
Peak Pulse Voltage					
(Note 4)	V_{OUT}	3.5	4.5		Volts
Diode Voltage Drop					
(Note 3)	V_D	.30	.45	.60	Volts
Minimum Charge to Trigger					
(V_{BB} = 10V)	Q_t		50		pC
Turn-on Time (See Figure 7)	t_{on}			1	μsec.
Recovery Time (See Figure 7)	t_{rec}			10	μsec.
Relaxation Oscillator Frequency Shift from 25°C Value (See Figure 1, C = 0.1μF, R_{B2} = 950Ω, V_S = 12.5V)					
−15°C to +65°C			0.2	0.6	%
−55°C to +150°C			0.4	1.0	%