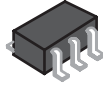


RoHS Compliant Product

CA ~ a A - A D A] ^ & a a • A c e h * ^ } A / A ^ a a E i ^ ^

SOT-363

*** Features**



Power dissipation.

$P_{CM} : 0.2 \text{ W (Temp.}=25^{\circ}\text{C)}$

Collector current

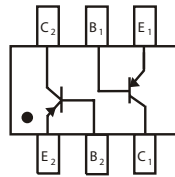
$I_{CM} : - 0.2 \text{ A}$

Collector -base voltage

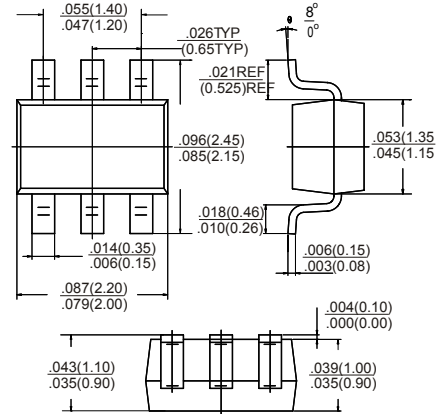
$V_{(BR)CBO} : - 40 \text{ V}$

Operating & storage junction temperature

$T_j, T_{stg} : -55^{\circ}\text{C} \sim +150^{\circ}\text{C}$



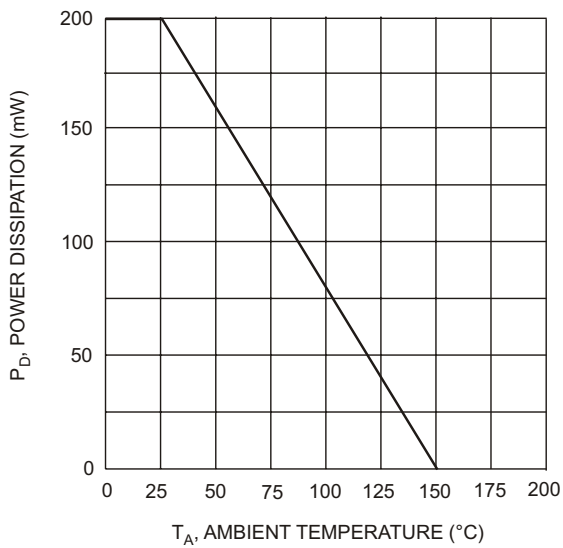
Marking : K3N or A2



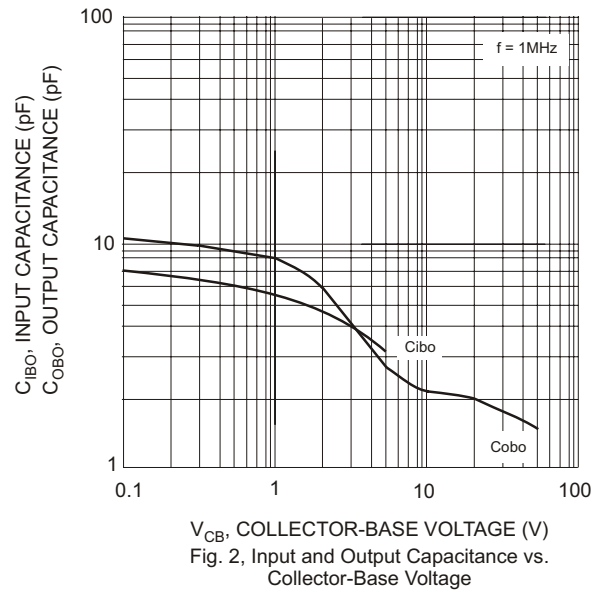
Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

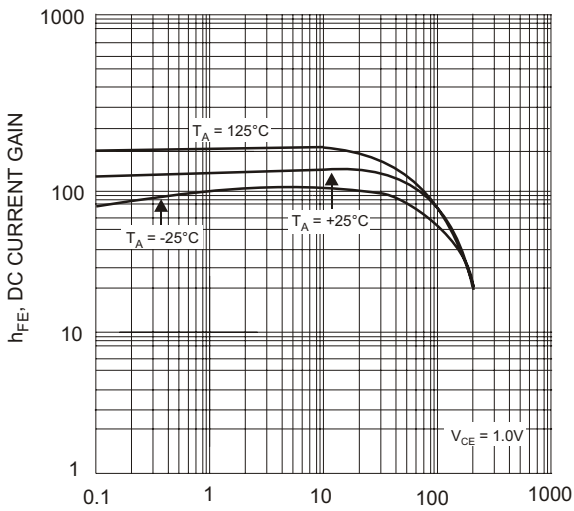
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10 \mu\text{A}, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-0.05	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.05	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -0.1\text{mA}$	60			
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -1\text{mA}$	80			
	$h_{FE(3)}$	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	100		300	
	$h_{FE(4)}$	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	60			
	$h_{FE(5)}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$			-0.25	V
	$V_{CE(sat)2}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$	-0.65		-0.85	V
	$V_{BE(sat)2}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.95	V
Transition frequency	f_T	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	250			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -5\text{V}, I_E = 0, f = 1\text{MHz}$			4.5	pF
Noise figure	NF	$V_{CE} = -5\text{V}, I_C = -0.1\text{mA}, f = 1\text{KHz}, R_g = 1\text{K}\Omega$			4	dB
Delay time	t_d	$V_{CC} = -3\text{V}, V_{BE} = 0.5\text{V}$			35	nS
Rise time	t_r	$I_C = -10\text{mA}, I_{B1} = -I_{B2} = -1\text{mA}$			35	nS
Storage time	t_s	$V_{CC} = -3\text{V}, I_C = -10\text{mA}$			225	nS
Fall time	t_f	$I_{B1} = -I_{B2} = -1\text{mA}$			75	nS



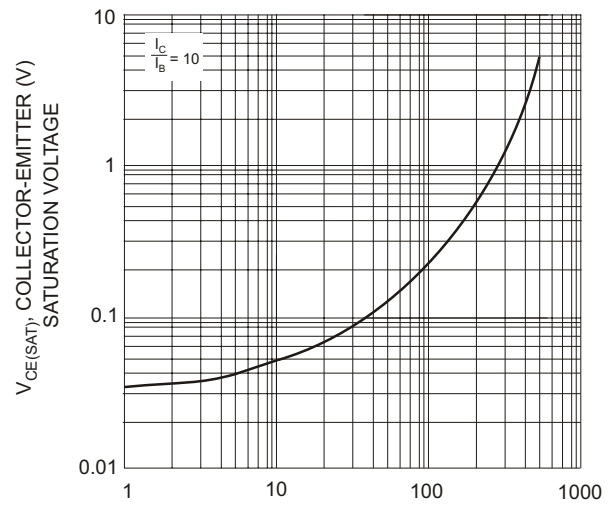
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1, Max Power Dissipation vs Ambient Temperature



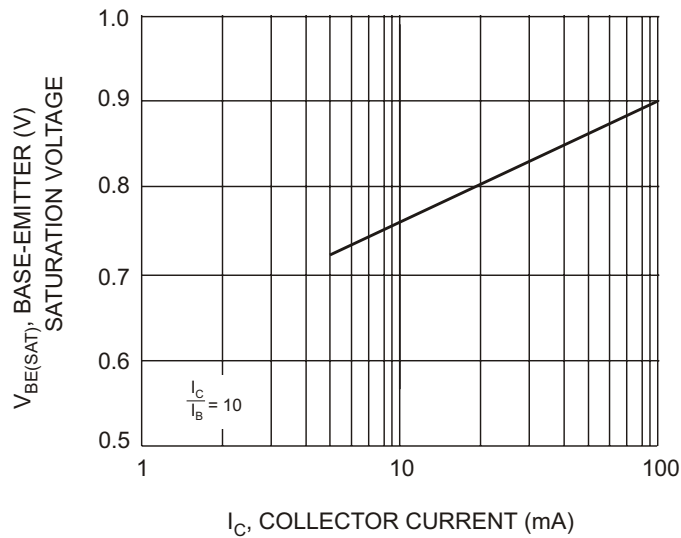
V_{CB} , COLLECTOR-BASE VOLTAGE (V)
Fig. 2, Input and Output Capacitance vs. Collector-Base Voltage



I_C , COLLECTOR CURRENT (mA)
Fig. 3, Typical DC Current Gain vs Collector Current



I_C , COLLECTOR CURRENT (mA)
Fig. 4, Typical Collector-Emitter Saturation Voltage vs. Collector Current



I_C , COLLECTOR CURRENT (mA)
Fig. 5, Typical Base-Emitter Saturation Voltage vs. Collector Current