

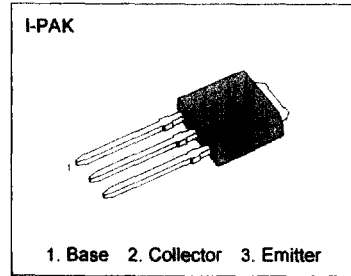
KSC3233 NPN TRIPLE DIFFUSED PLANAR SILICON TRANSISTOR

HIGH SPEED SWITCHING

- Low Collector Emitter Saturation Voltage
- High speed Switching : $t_r=1 \mu S(\text{MAX}), I_C=0.8A$
- Collector Emitter Voltage : $V_{CE0}=400V$

ABSOLUTE MAXIMUM RATINGS

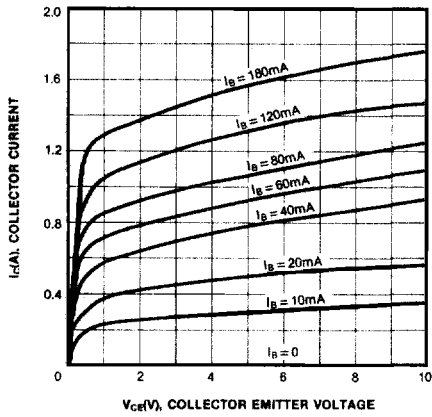
Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	500	V
Collector Emitter Voltage	V_{CEO}	400	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	2	A
Base Current	I_B	0.5	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	20	W
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$



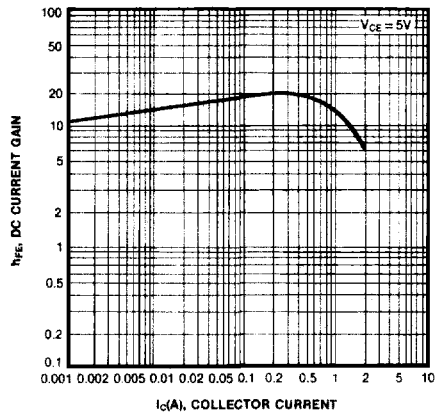
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	MAX	Unit
Collector Base Breakdown Voltage	BV_{CEO}	$I_C = 1\text{mA}, I_E = 0$	500		V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10\text{mA}, I_B = 0$	400		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 400V, I_E = 0$		100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7V, I_C = 0$		1	mA
DC Current Gain	h_{FE1}	$V_{CE} = 5V, I_C = 0.1A$	20		
	h_{FE2}	$V_{CE} = 5V, I_C = 1A$	8		
Collector Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 1A, I_B = 0.2A$		1	V
Base Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C = 1A, I_E = 0.2A$		1.5	V
Turn On Time	t_{ON}	$I_{B1} = -I_{B2} = 0.08A$		1	μS
Storage Time	t_{STG}	$V_{CC} = 200V$		2.5	μS
Fall Time	t_F			1	μS

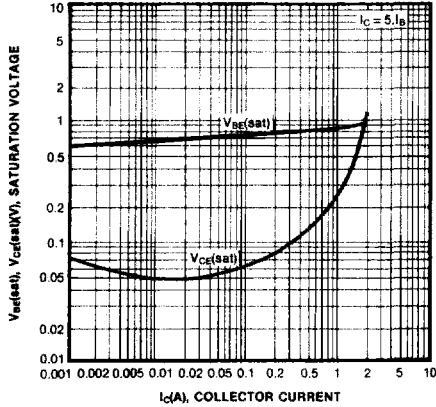
STATIC CHARACTERISTIC



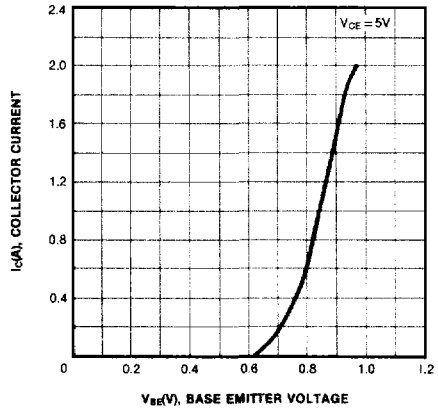
DC CURRENT GAIN



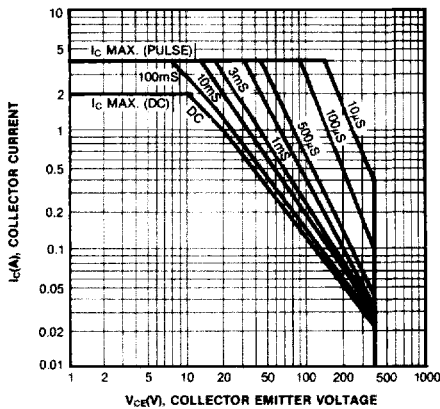
BASE EMITTER SATURATION VOLTAGE
COLLECTOR EMITTER SATURATION VOLTAGE



BASE EMITTER ON VOLTAGE



SAFE OPERATING AREA



POWER DERATING

