

KSC3076

NPN EPITAXIAL SILICON TRANSISTOR

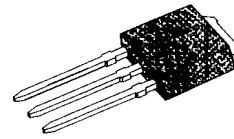
POWER AMPLIFIER APPLICATIONS

- Low Collector Emitter Saturation Voltage
- Complement to KSA 1241

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Base Current	I_B	1	A
Collector Current	I_C	2	A
Collector Dissipation ($T_A=25^{\circ}\text{C}$)	P_C	1	W
Collector Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	10	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^{\circ}\text{C}$

I-PACK



1. Base 2. Collector 3. Emitter

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10\text{mA}$, $I_B = 0$	50			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 50\text{V}$, $I_E = 0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			1	μA
DC Current Gain	h_{FE1}	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$	70		240	
	h_{FE2}	$V_{CE} = 2\text{V}$, $I_C = 1.5\text{A}$	40			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}$, $I_B = 0.05\text{A}$			0.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}$, $I_B = 0.05\text{A}$			1.2	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$		100		MHz
Output Capacitance	C_{OB}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		30		pF
Turn On Time	t_{ON}	$V_{CC} = 30\text{V}$		0.1		μs
Storage Time	t_{STG}	$I_{B1} = -I_{B2} = 0.05\text{A}$		1		μs
Fall Time	t_F			0.1		μs

$h_{FE}(1)$ CLASSIFICATION

Classification	O	Y
h_{FE1}	70 ~ 140	120 ~ 240