



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92MOD Plastic-Encapsulate Transistors

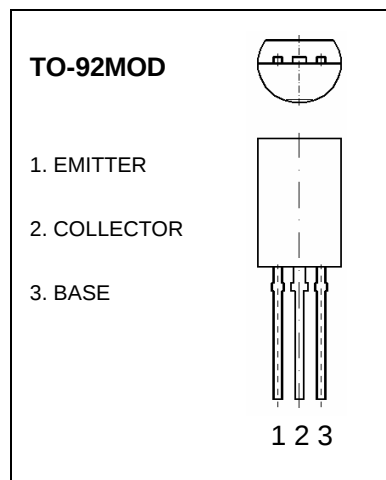
KSC2316 TRANSISTOR (NPN)

FEATURES

- Driver stage amplifier
- Complement to KSA916

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	800	mA
P_C	Collector Power Dissipation	900	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}$, $I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}$, $I_B=0$	120			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=120\text{V}$, $I_E=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$	60			
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$	80		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			1	V
Transition frequency	f_T	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$			30	pF

CLASSIFICATION OF $h_{FE(2)}$

Rank	O	Y
Range	80-160	120-240

Typical Characteristics

KSC2316

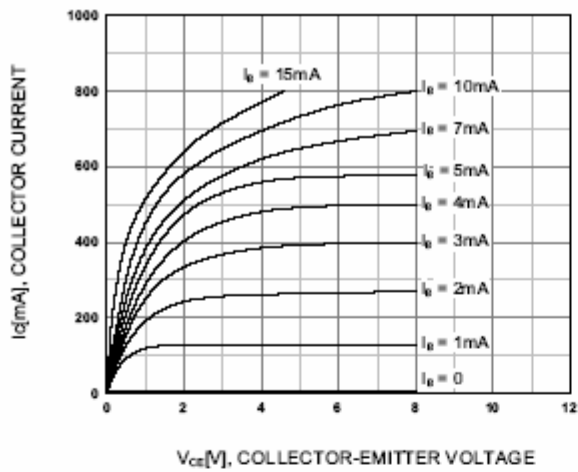


Figure 1. Static Characteristic

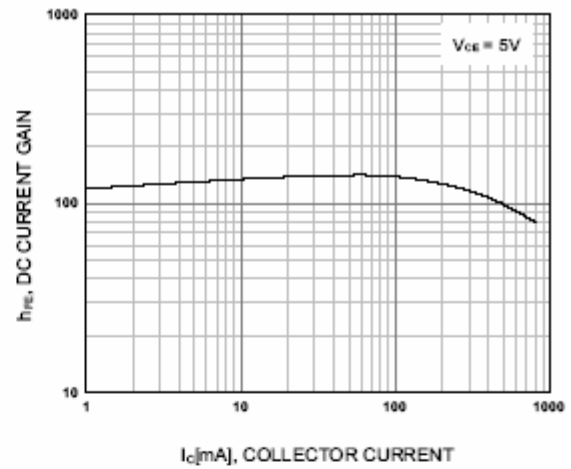


Figure 2. DC current Gain

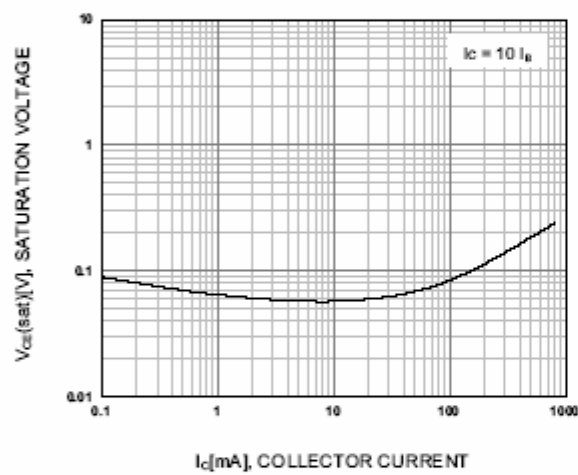


Figure 3. Collector-Emitter Saturation Voltage

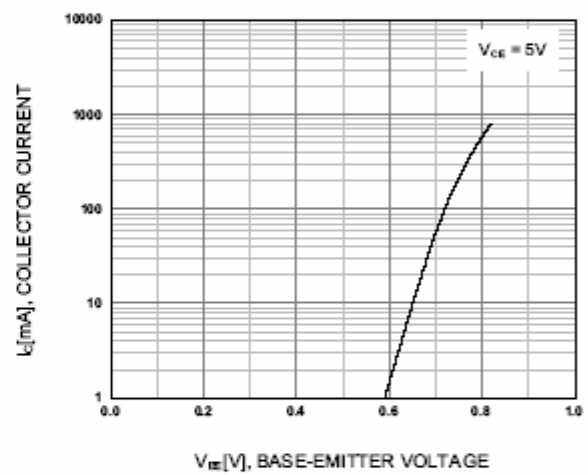


Figure 4. Base-Emitter On Voltage

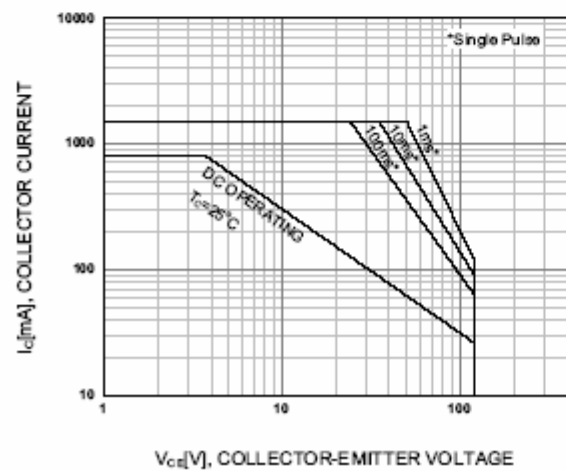


Figure 5. Safe Operating Area

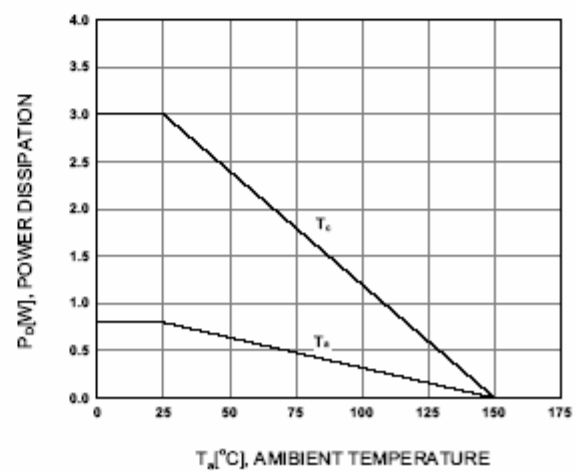


Figure 6. Power Derating