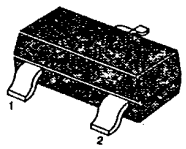
KSC3125 NPN EPITAXIAL SILICON TRANSISTOR

T-31-15

TV FINAL PICTURE AMPLIFIER APPLICATION

SOT-23



1. Base 2. Emitter 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

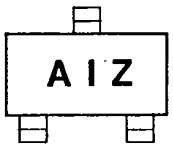
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	150	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55~150	°C

• Refer to KSC388 for graphs

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage		I_C=1mA, I_B=0	25			V
Collector Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0			0.1	uA
Emitter Cutoff Current	I_{EBO}	V_{EB}=3V, I_C=0			0.1	uA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=10mA	20	70	200	
Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C=15mA, I_B=1.5mA			0.2	V
Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C=15mA, I_B=1.5mA			1.5	V
Current Gain-Bandwidth Product	f_T	I_C=10mA, V_{CE}=10V	250	600		MHz
Output Capacitance	Cob	V_{CB}=10V, I_E=0 f=1MHz		1.1	1.6	pF

Marking



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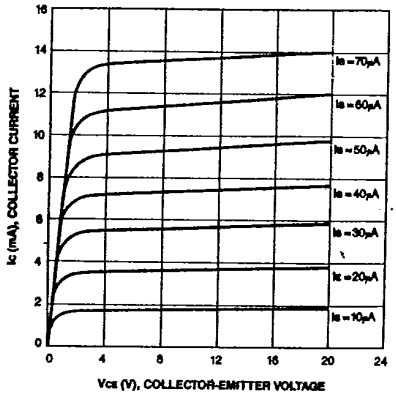
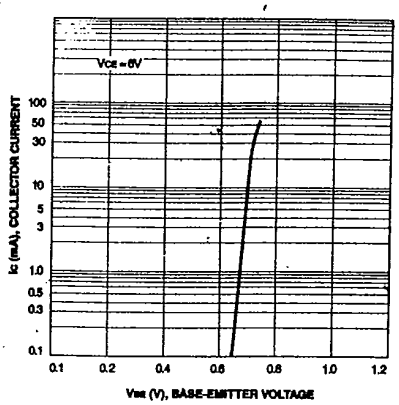
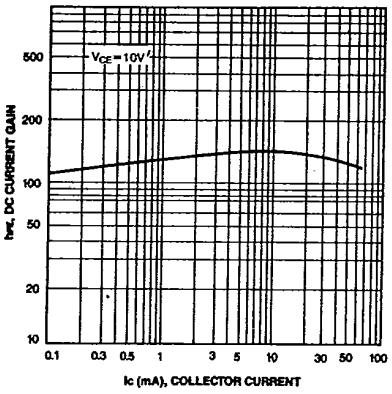
STATIC CHARACTERISTIC



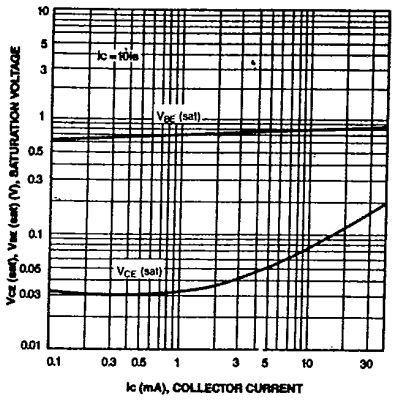
BASE-EMITTER ON VOLTAGE



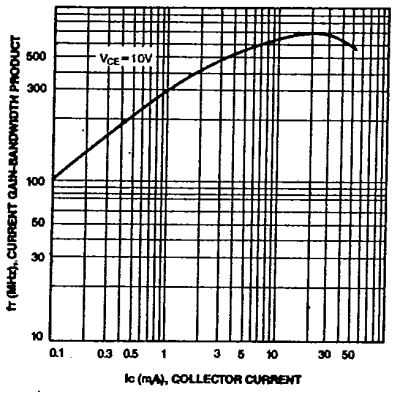
DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



INPUT CAPACITANCE
COLLECTOR OUTPUT CAPACITANCE