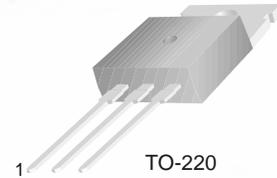


**FAIRCHILD**  
SEMICONDUCTOR®

## KSC1507

### Color TV Chroma Output

- High Collector-Emitter Voltage :  $V_{CEO}=300V$
- Current Gain Bandwidth Product :  $f_T=40MHz$  (Min.)



1.Base 2.Collector 3.Emitter

### NPN Epitaxial Silicon Transistor

**Absolute Maximum Ratings**  $T_C=25^\circ C$  unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	300	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current	0.2	mA
$P_C$	Collector Dissipation ( $T_C=25^\circ C$ )	15	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ C$

**Electrical Characteristics**  $T_C=25^\circ C$  unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 100\mu A, I_E = 0$	300			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	300			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	7			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 200V, I_E = 0$			100	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE} = 10V, I_C = 10mA$	40		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 50mA, I_B = 5mA$			2.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 30V, I_C = 10mA$	40	80		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = 50V, I_E = 0, f = 1MHz$		4		pF

### $h_{FE}$ Classification

Classification	R	O	Y
$h_{FE}$	40 ~ 80	70 ~ 140	120 ~ 240



# Typical Characteristics

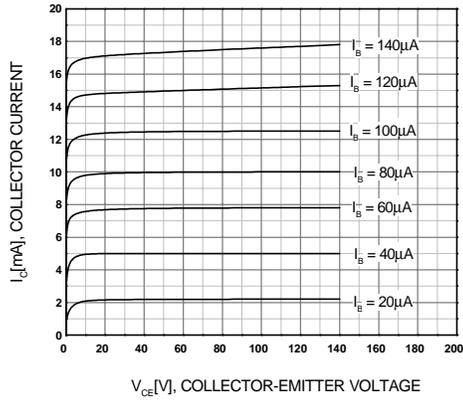


Figure 1. Static Characteristic

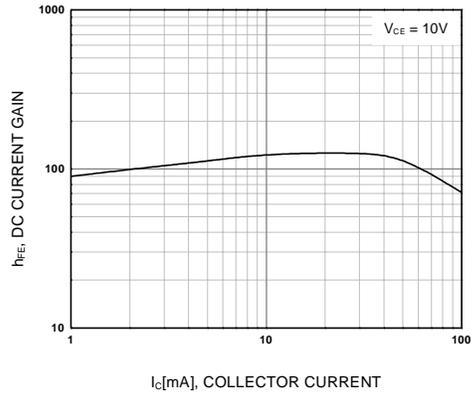


Figure 2. DC current Gain

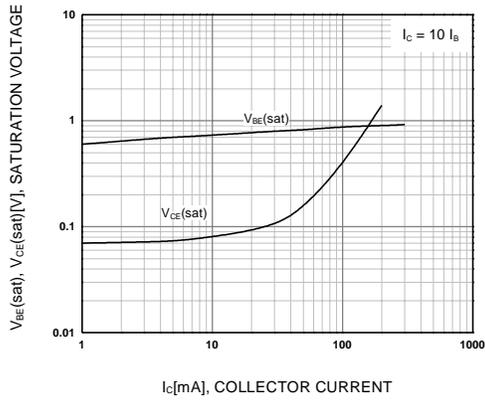


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

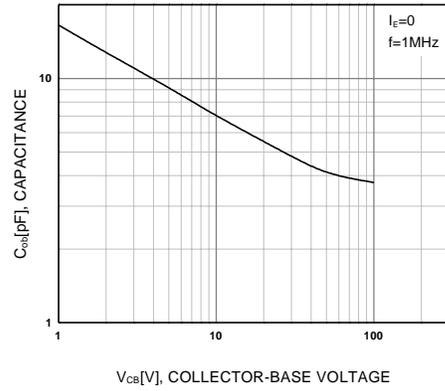


Figure 4. Collector Output Capacitance

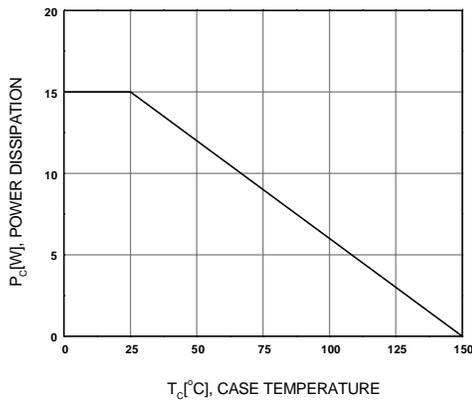
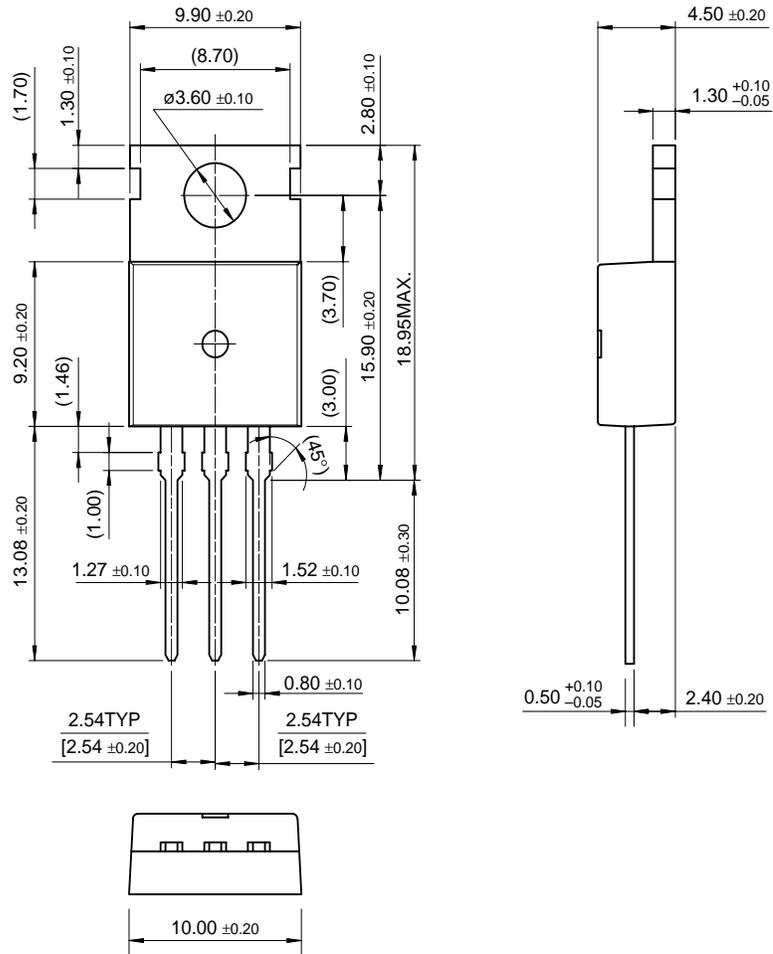


Figure 5. Power Derating

# Package Dimensions

## TO-220



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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