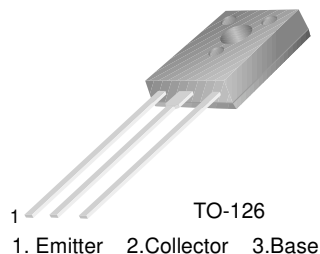


# KSC2688

KSC2688

**Color TV Chroma Output & Video Output**



## NPN Epitaxial Silicon Transistor

**Absolute Maximum Ratings**  $T_C=25^\circ\text{C}$  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	5	V
$I_C$	Collector Current	200	mA
$P_C$	Collector Dissipation ( $T_a=25^\circ\text{C}$ )	1.25	W
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	10	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 0.1\text{mA}, I_E = 0$	300			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 5\text{mA}, I_B = 0, R_{BE} = \infty$	300			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 0.1\text{mA}, I_C = 0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 200\text{V}, I_E = 0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 4\text{V}, I_C = 0$			100	$\mu\text{A}$
$h_{FE}$	* DC Current Gain	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	40		250	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 50\text{mA}, I_B = 5\text{mA}$			1.5	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 30\text{V}, I_E = -10\text{mA}$	50	80		MHz
$C_{re}$	Feed Back Capacitance	$V_{CB} = 30\text{V}, I_E = 0$ $f = 1\text{MHz}$			3	pF

\* Pulse Test:  $PW \leq 350\mu\text{s}$ , Duty Cycle  $\leq 2\%$

## $h_{FE}$ Classification

Classification	R	O	Y	G
$h_{FE}$	40 ~ 80	60 ~ 120	100 ~ 200	160 ~ 250

# Typical Characteristics

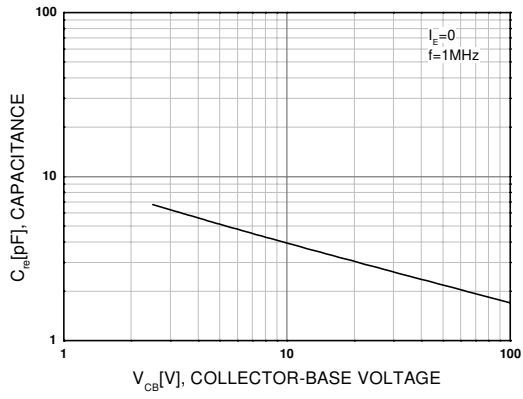


Figure 1. Feedback Capacitance

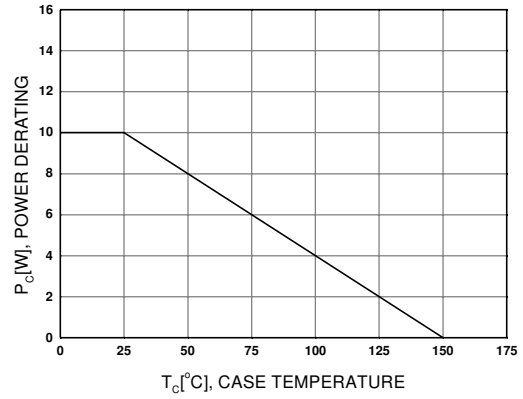


Figure 2. Power Derating

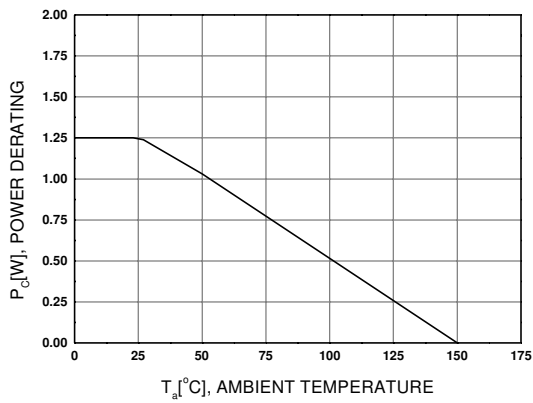
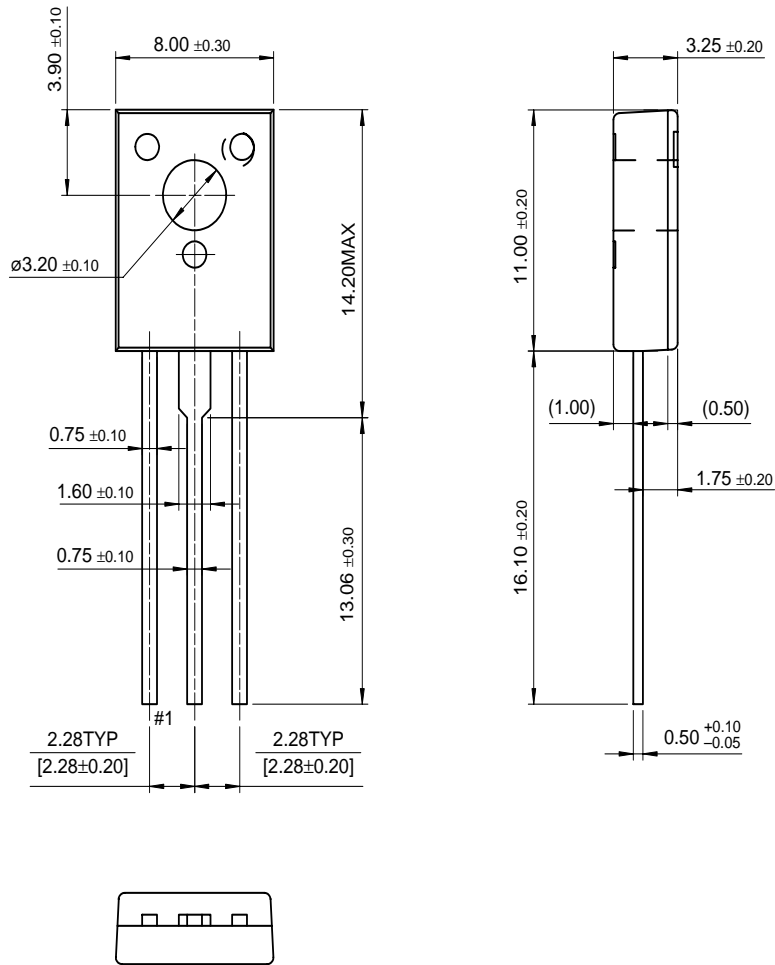


Figure 3. Power Derating

# Package Dimensions

KSC2688

## TO-126



Dimensions in Millimeters

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CoolFET™	MICROWIRE™	TinyLogic™
CROSSVOLT™	POP™	UHC™
E <sup>2</sup> CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
FACT Quiet Series™	QS™	
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