

**isc Silicon NPN Power Transistors**
**2SC2085**
**DESCRIPTION**

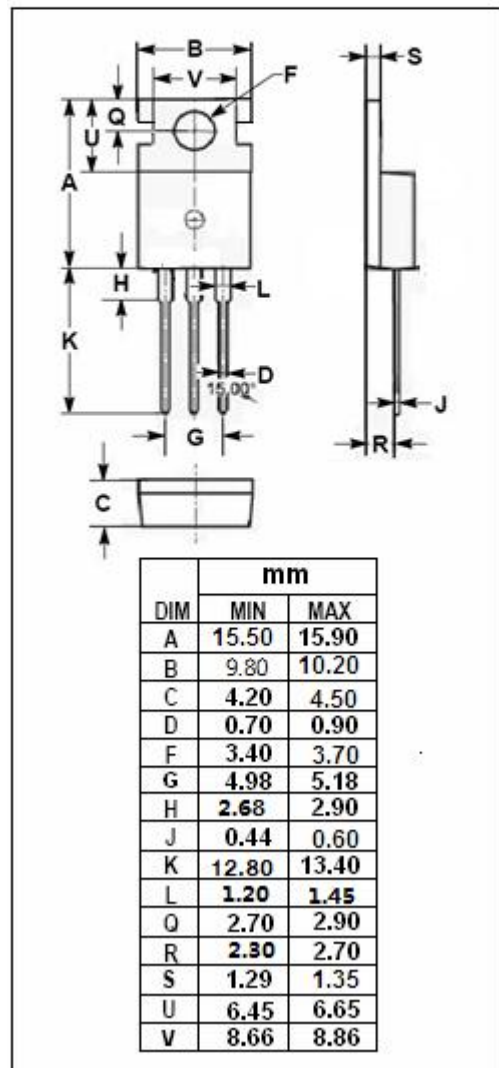
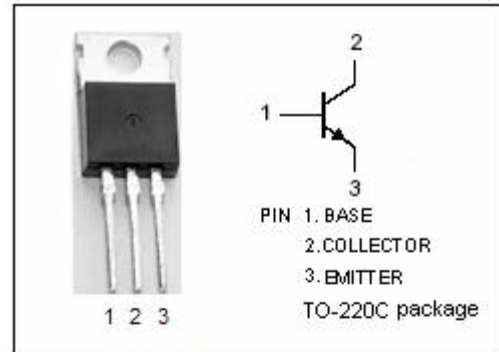
- Collector-Base Breakdown Voltage-  
:  $V_{(BR)CBO} = 300V(\text{Min.})$
- Large collector power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- 1W output in class-A operation
- Line-operated AF amplifier chrominance output

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	300	V
$V_{CER}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	100	mA
$I_{CM}$	Collector Current-Peak	150	mA
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	10	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**ELECTRICAL CHARACTERISTICS**
 $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CER}$	Collector-Emitter Voltage	$I_C=5\text{mA}; R_{BE}=3\text{k}\Omega$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=10\text{mA}$			5.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=50\text{mA}; V_{CE}=10\text{V}$			1.2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=300\text{V}; I_B=0$			20	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=10\text{mA}; V_{CE}=10\text{V}$	30			
$h_{FE-2}$	DC Current Gain	$I_C=50\text{mA}; V_{CE}=10\text{V}$	30		150	
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=30\text{V}; f=1.0\text{MHz}$		8		pF
$f_T$	Current-Gain—Bandwidth Product	$I_E=-20\text{mA}; V_{CB}=30\text{V}; f=200\text{MHz}$		55		MHz

**◆  $h_{FE-2}$  Classifications**

P	Q	R
30-60	50-100	80-150

**Notice:**

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.

