

isc Silicon NPN Power Transistor

2SD5072

DESCRIPTION

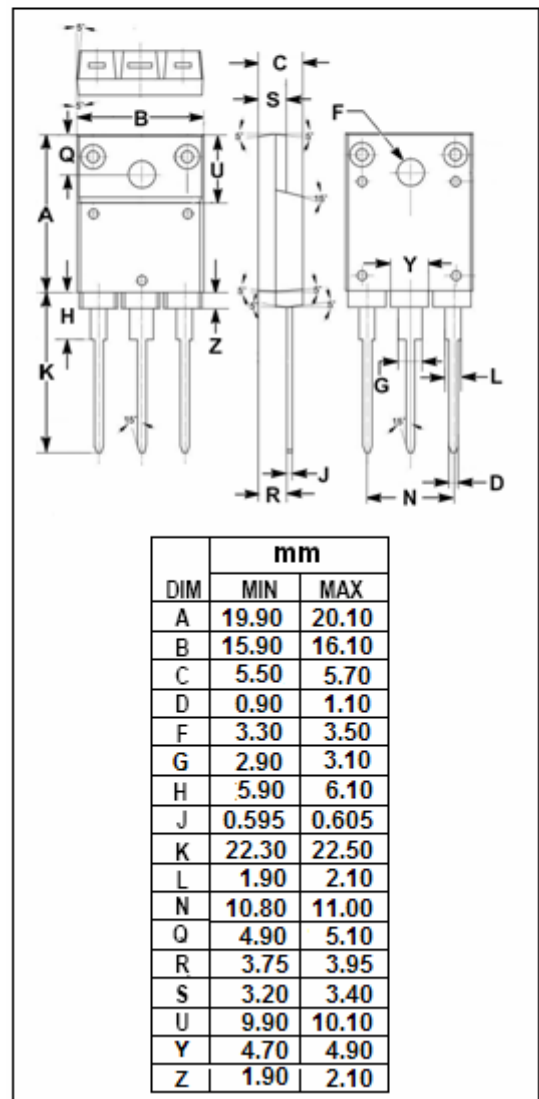
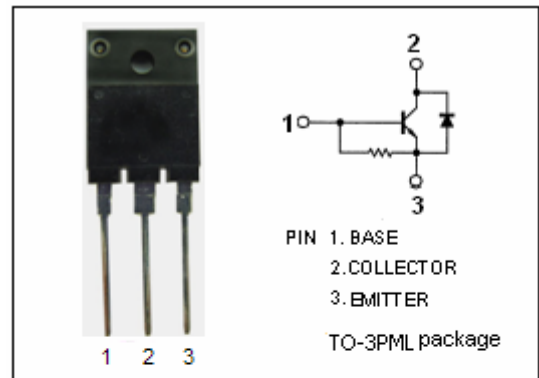
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- High Reliability
- Built-in Damper Diode

APPLICATIONS

- Designed for color TV horizontal output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current- Continuous	5	A
$I_{CM}$	Collector Current-Peak	16	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	60	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



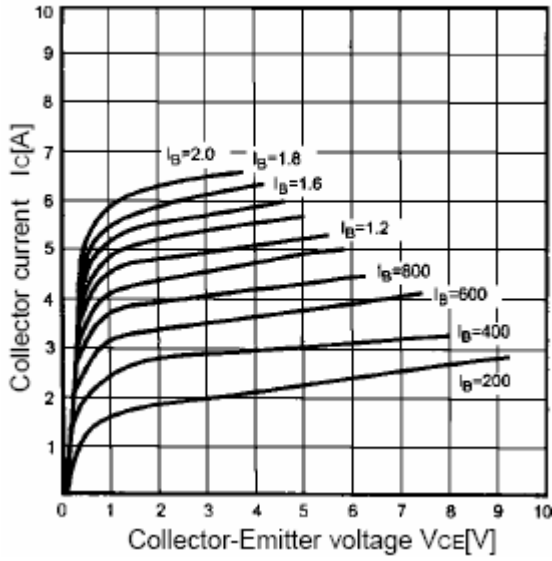
**isc Silicon NPN Power Transistor****2SD5072****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.8\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.8\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=800\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$	40		200	mA
$h_{FE}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=5\text{A}$			2.0	V
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		3		MHz
$t_f$	Fall Time	$I_C=4\text{A}; I_{B1}=0.8\text{A}; I_{B2}=-1.6\text{A}$ $R_L=50\Omega; V_{CC}=200\text{V}$			0.4	$\mu\text{s}$

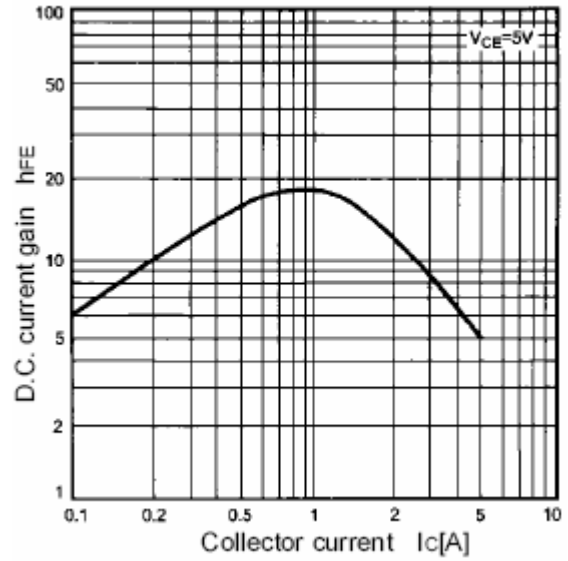
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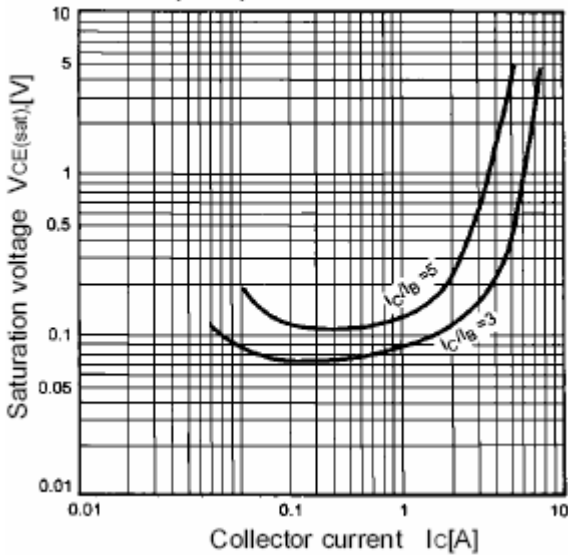
**$I_C$ - $V_{CE}$  Characteristics**



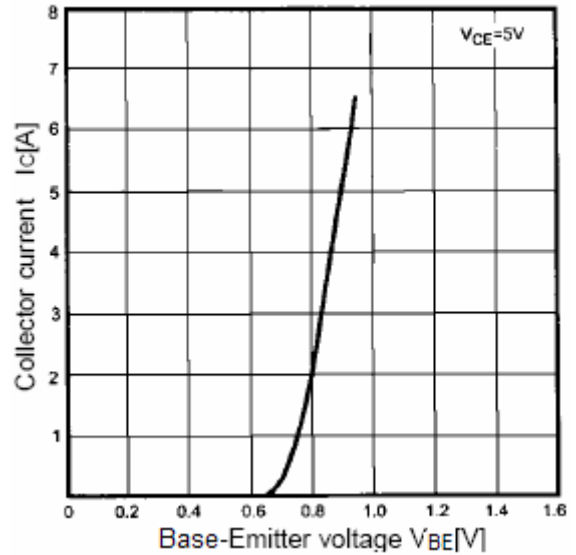
**$h_{FE}$ - $I_C$  Characteristics**



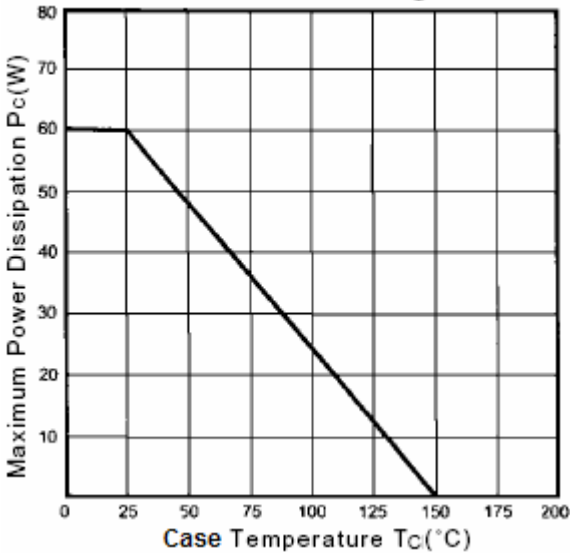
**$V_{CE(sat)}$ - $I_C$  Characteristics**



**$I_C$ - $V_{BE}$  Characteristics**



**Power Derating**



**Safe Operating Area**

