

isc Silicon NPN Power Transistor

BU603

DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 550V(\text{Min})$
- High Switching Speed

APPLICATIONS

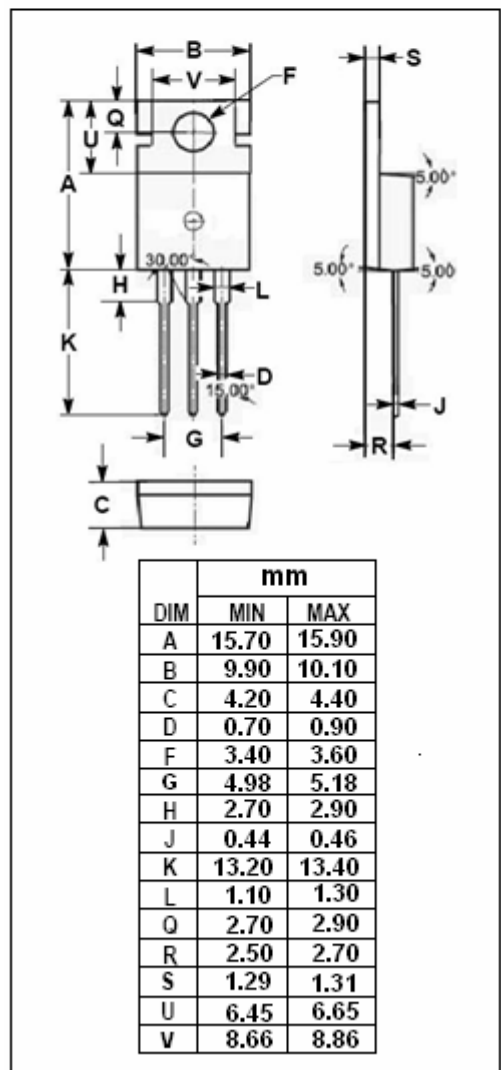
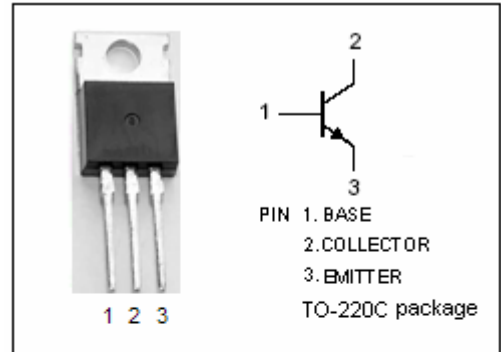
- Designed for use in power supplies and deflection circuits for color receivers and monitors

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector-Emitter Voltage- $V_{BE} = 0$	1350	V
$V_{CEO}$	Collector-Emitter Voltage	550	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$I_B$	Base Current-Continuous	2	A
$I_{BM}$	Base Current-Peak	4	A
$I_E$	Emitter Current-Continuous	7	A
$I_{EM}$	Emitter Current-Peak	12	A
$P_C$	Collector Power Dissipation $T_c=25^\circ\text{C}$	100	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	550			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.33\text{A}$			2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1.33\text{A}$			3	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}=V_{CESmax}; V_{BE}=0$ $V_{CE}=V_{CESmax}; V_{BE}=0; T_J=125^\circ\text{C}$			1 2	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=6\text{V}; I_C=0$			1	mA
$h_{FE-1}$	DC Current Gain	$I_C=10\text{mA}; V_{CE}=5\text{V}$	6			
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
$h_{FE-3}$	DC Current Gain	$I_C=2\text{A}; V_{CE}=2\text{V}$	6			
$h_{FE-4}$	DC Current Gain	$I_C=4\text{A}; V_{CE}=3\text{V}$	3			

## Switching Times; Resistive Load

$t_{on}$	Turn-On Time	$I_C=2\text{A}; I_{B1}=-I_{B2}=0.33\text{A}$			0.5	$\mu\text{s}$
$t_s$	Storage Time				6.0	$\mu\text{s}$
$t_f$	Fall Time				0.7	$\mu\text{s}$