

isc Silicon NPN Power Transistor

2SC4438

DESCRIPTION

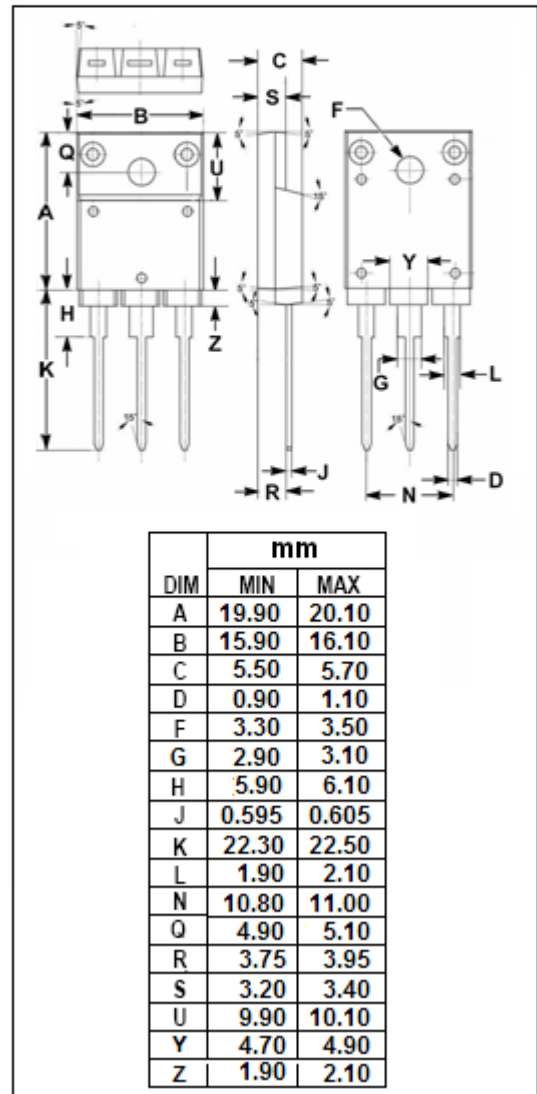
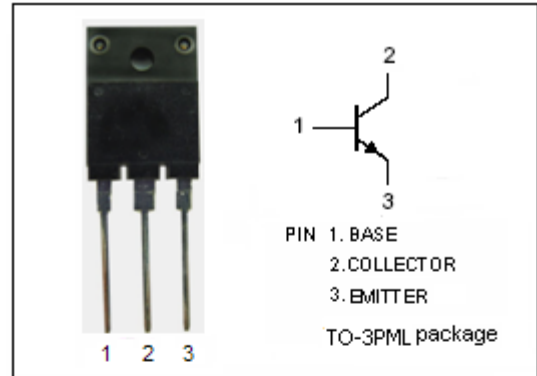
- High Breakdown Voltage-  
:  $V_{(BR)CBO} = 1500V(\text{Min})$
- High Switching Speed
- High Reliability

APPLICATIONS

- Ultrahigh-definition color display horizontal deflection output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	6	A
$I_{CP}$	Collector Current-Peak	16	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	50	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SC4438****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	$I_C=0.1\text{A}; I_B=0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.2\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.2\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=800\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{CES}$	Collector Cutoff Current	$V_{CE}=1500\text{V}; R_{BE}=0$			1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			1.0	mA
$h_{FE-1}$	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
$h_{FE-2}$	DC current gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	4		6	

## Switching times

$t_{stg}$	Storage Time	$I_C=5\text{A}, I_{B1}=1\text{A}; I_{B2}=-2\text{A}; V_{CC}=200\text{V}$			3.0	$\mu\text{s}$
$t_f$	Fall Time				0.3	$\mu\text{s}$