

isc Silicon NPN Power Transistor

2SC3910

DESCRIPTION

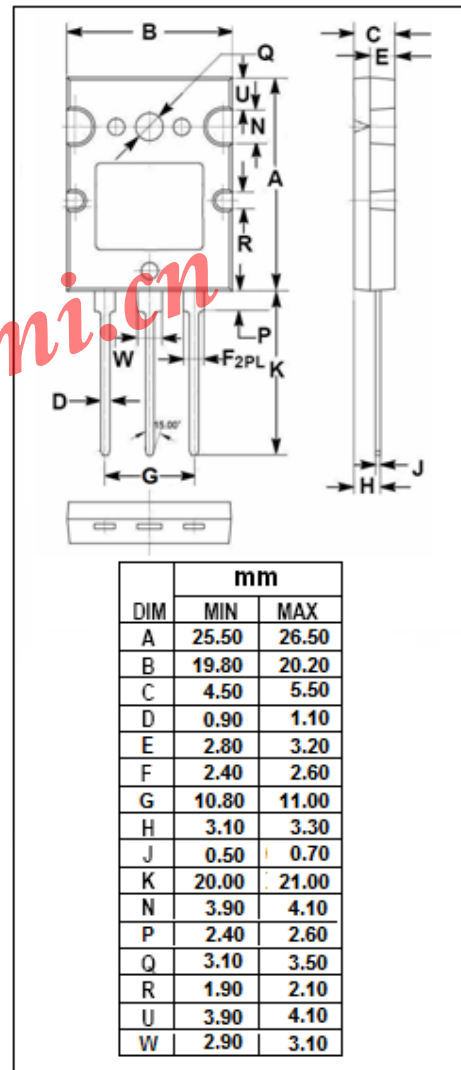
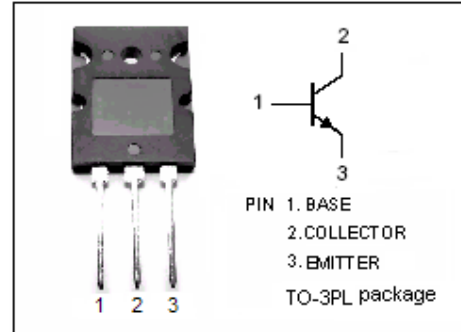
- High Speed Switching
- High Collector-Base Breakdown Voltage-  
:  $V_{(BR)CEO} = 800V(\text{Min})$
- Good Linearity of  $h_{FE}$

APPLICATIONS

- Designed for high speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	800	V
$V_{CEO}$	Collector-Emitter Voltage	500	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	30	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3.5	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



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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	$I_C= 0.5A ; L= 25mH$	500			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 8.0A; I_B= 1.6A$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 8.0A; I_B= 1.6A$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}= 800V ; I_E= 0$			100	$\mu A$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 7V; I_C= 0$			100	$\mu A$
$h_{FE-1}$	DC Current Gain	$I_C= 0.1A ; V_{CE}= 5V$		15		
$h_{FE-2}$	DC Current Gain	$I_C= 8A ; V_{CE}= 5V$		10		
$f_T$	Current-Gain—Bandwidth Product	$I_C= 0.5A; V_{CE}= 10V; f= 0.5MHz$		2		MHz

## Switching times

$t_{on}$	Turn-on Time	$I_C= 8A ; I_{B1}= 1.6A; I_{B2}= -1.6A; V_{CC}= 200V$			1.0	$\mu s$
$t_{stg}$	Storage Time				3.0	$\mu s$
$t_f$	Fall Time				1.0	$\mu s$