

**Silicon NPN Power Transistor**

**2SC5299**

**DESCRIPTION**

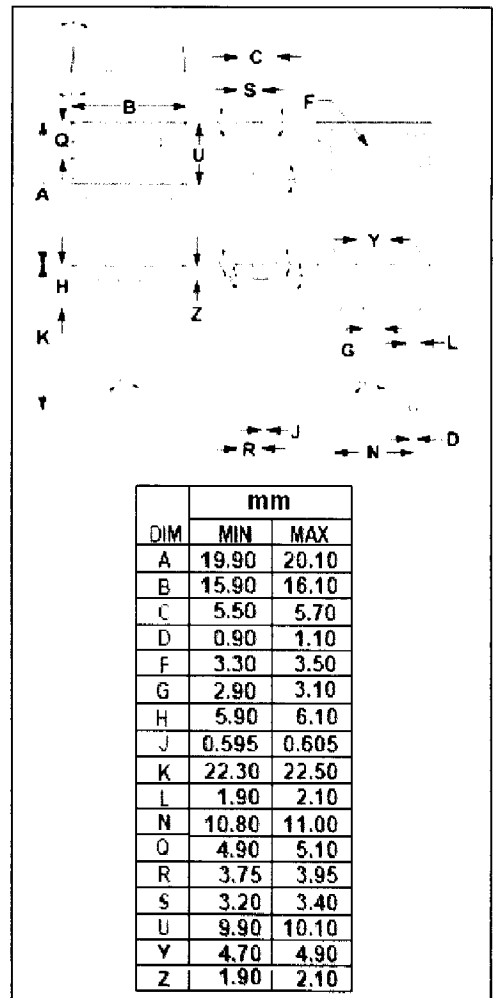
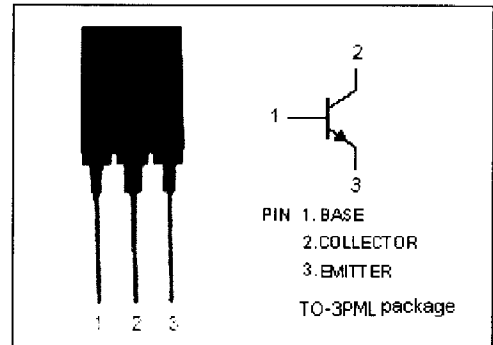
- High Breakdown Voltage-  
 :  $V_{(BR)CBO} = 1500V(\text{Min})$
- High Switching Speed
- High Reliability

**APPLICATIONS**

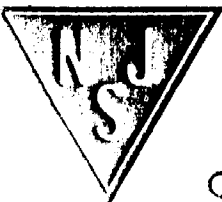
- Ultrahigh-definition CRT display horizontal deflection output applications

**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	6	V
$I_C$	Collector Current-Continuous	10	A
$I_{CP}$	Collector Current-Peak	25	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3.0	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	70	
$T_J$	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	$I_C = 0.1\text{A}; I_B = 0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 8\text{A}; I_B = 2\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 8\text{A}; I_B = 2\text{A}$			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	$I_C = 1\text{A}; V_{CE} = 5\text{V}$	20		30	
$h_{FE-2}$	DC current gain	$I_C = 8\text{A}; V_{CE} = 5\text{V}$	4		7	

### Switching times

$t_{stg}$	Storage Time	$I_C = 6\text{A}; I_{B1} = 1.2\text{A}; I_{B2} = -2.4\text{A}$ $R_L = 50\Omega; V_{CC} = 200\text{V}$			3.0	$\mu\text{s}$
$t_f$	Fall Time				0.2	$\mu\text{s}$