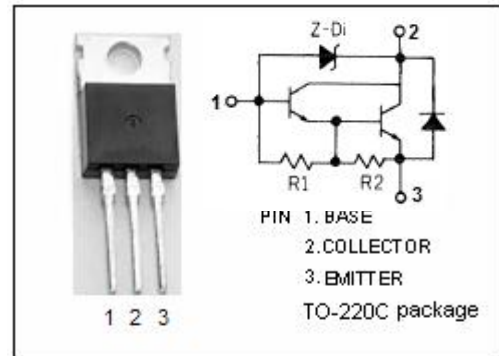


**isc Silicon NPN Darlington Power Transistor**
**2SD1395**
**DESCRIPTION**

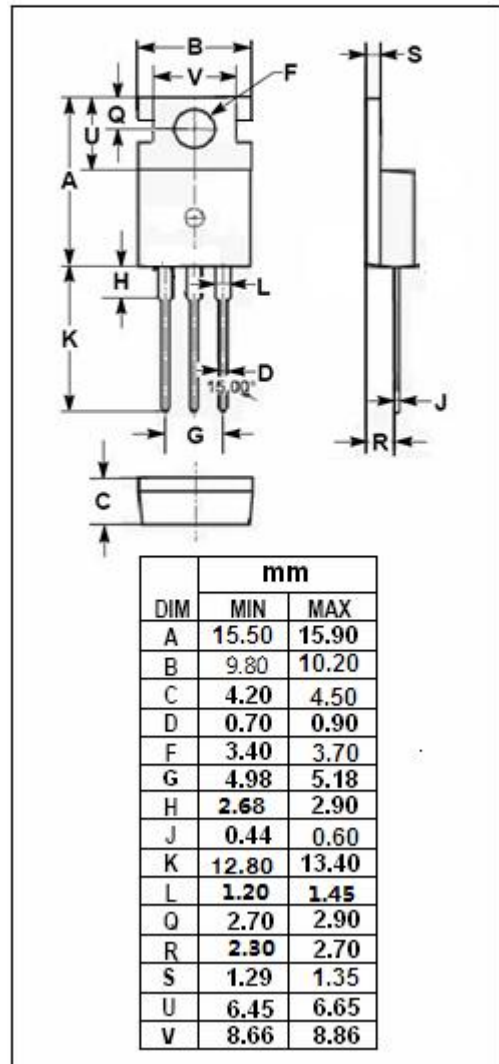
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 50V(\text{Min})$
- High DC Current Gain  
:  $h_{FE} = 1000(\text{Min}) @ I_C = 2.5A$
- Low Saturation Voltage
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

- Designed for general purpose amplifier and low speed switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	5	A
$I_{CP}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Darlington Power Transistor**
**2SD1395**
**ELECTRICAL CHARACTERISTICS**
 $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$ , $I_B=0$	50			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}$ , $I_B=5\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2.5\text{A}$ , $I_B=5\text{mA}$			2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=50\text{V}$ , $I_E=0$			0.1	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=50\text{V}$ , $I_B=0$			1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}$ ; $I_C=0$			3.0	mA
$h_{FE}$	DC Current Gain	$I_C=2.5\text{A}$ ; $V_{CE}=3\text{V}$	1000		15000	
$f_T$	Current-Gain—Bandwidth Product	$I_C=2.5\text{A}$ ; $V_{CE}=5\text{V}$		20		MHz

## Switching Times

$t_{on}$	Turn-on Time	$I_C=3.0\text{A}$ ; $I_{B1}=I_{B2}=6\text{mA}$		0.6		$\mu\text{s}$
$t_s$	Storage Time			4.0		$\mu\text{s}$
$t_f$	Fall Time			1.5		$\mu\text{s}$

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