

isc Silicon PNP Darlington Power Transistor

2SB727

DESCRIPTION

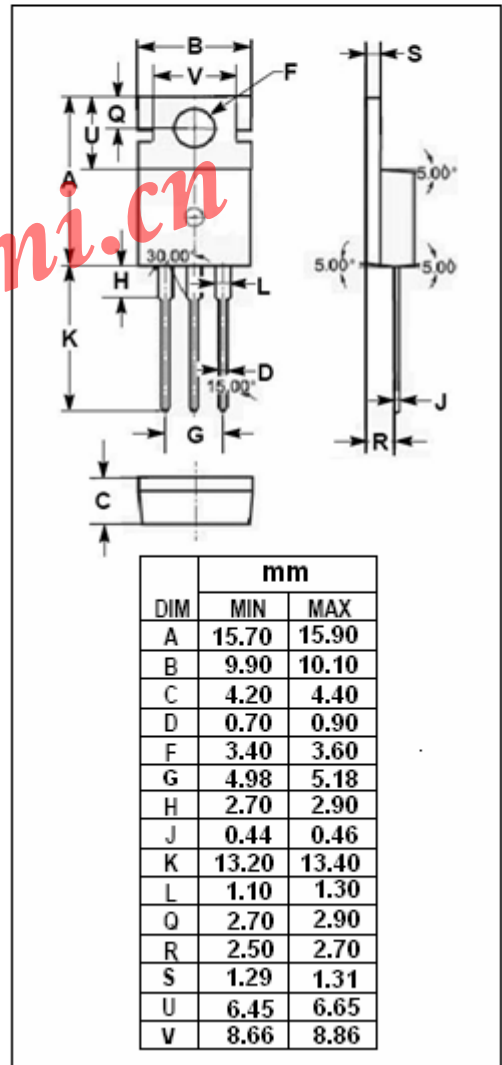
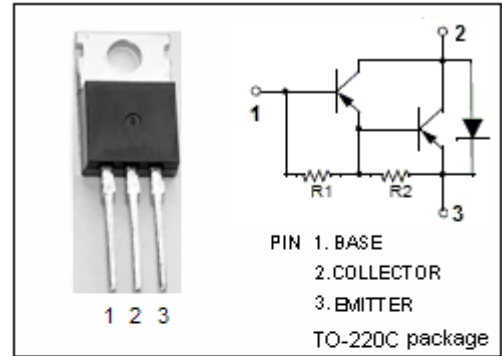
- High DC Current Gain-  
:  $h_{FE} = 1000(\text{Min}) @ I_C = -3A$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(\text{sat})} = -1.5V(\text{Max}) @ I_C = -3A$
- Complement to Type 2SD768

APPLICATIONS

- Medium speed and power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-7	V
$I_C$	Collector Current-Continuous	-6	A
$I_{CM}$	Collector Current-Peak	-10	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	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -25\text{mA}$ , $R_{BE} = \infty$	-120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -50\text{mA}$ , $I_C = 0$	-7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}$ , $I_B = -6\text{mA}$			-1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -6\text{A}$ , $I_B = -60\text{mA}$			-3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C = -3\text{A}$ , $I_B = -6\text{mA}$			-2.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C = -6\text{A}$ , $I_B = -60\text{mA}$			-3.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -120\text{V}$ , $I_E = 0$			-100	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -100\text{V}$ ; $R_{BE} = \infty$			-10	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -3\text{A}$ ; $V_{CE} = -3\text{V}$	1000		20000	

## Switching times

$t_{on}$	Turn-On Time	$I_C = -3\text{A}$ ; $I_{B1} = -I_{B2} = -6\text{mA}$		1.0		$\mu\text{s}$
$t_{off}$	Turn-Off Time			3.0		$\mu\text{s}$