

**Silicon NPN Darlington Power Transistors**

**2SD2561**

**DESCRIPTION**

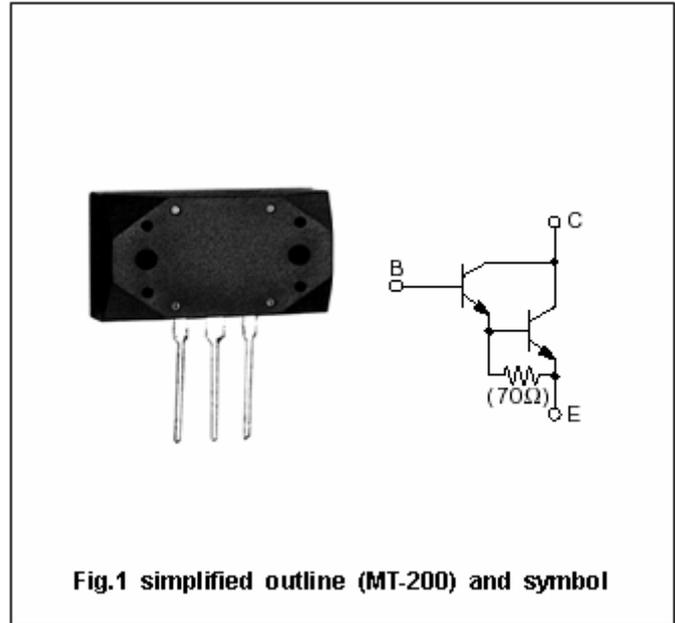
- With MT-200 package
- Complement to type 2SB1648

**APPLICATIONS**

- Audio ,series regulator and general purpose

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter



**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	150	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	150	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		17	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	200	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

## Silicon NPN Darlington Power Transistors

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=30\text{mA}; I_B=0$	150			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=10\text{A}; I_B=10\text{mA}$			2.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=10\text{A}; I_B=10\text{mA}$			3.0	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=150\text{V}; I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			100	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	5000			
$C_{ob}$	Output capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		120		pF
$f_T$	Transition frequency	$I_E=-2\text{A}; V_{CE}=12\text{V}$		70		MHz

## Switching times

$t_{on}$	Turn-on time	$I_C=10\text{A}; R_L=4\ \Omega$ $I_{B1}=-I_{B2}=10\text{mA}$ $V_{CC}=40\text{V}$		0.8		$\mu\text{s}$
$t_s$	Storage time			4.0		$\mu\text{s}$
$t_f$	Fall time			1.2		$\mu\text{s}$

◆  $h_{FE}$  Classifications

O	P	Y
5000-12000	6500-20000	15000-30000

PACKAGE OUTLINE

