

New Jersey Semi-Conductor Products, Inc.

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SPRINGFIELD, NEW JERSEY 07081
U.S.A.

2SD834

TRIPLE DIFFUSED PLANER TYPE HIGH POWER DARLINGTON SWITCHING

■ Features

- High D.C. current gain
- Low saturation voltage
- Excellent safe operating area
- High reliability

■ Applications

- Electronic ignitor
- Relay & solenoid drivers
- Switching regulators
- Motor controls

■ Maximum ratings and characteristics

● Absolute maximum ratings (Tc=25°C unless otherwise specified)

Item	Symbol	Ratings	Unit
Collector-Base voltage	V _{CBO}	250	V
Collector-Emitter voltage	V _{C EO}	200	V
Collector-Emitter voltage	V _{C EO(SUS)}	180	V
Emitter-Base voltage	V _{E BO}	10	V
Collector current	I _C	4	A
Base current	I _B	0.3	A
Collector power dissipation	P _C	25	W
Operating junction temperature	T _j	+150	°C
Storage temperature	T _{stg}	-55 to +150	°C

● Electrical characteristics (Tc =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CBO}	I _{CBO} = 0.1mA	250			V
Collector-Emitter voltage	V _{C EO}	I _{CEO} = 10mA	200			V
Collector-Emitter voltage	V _{C EO(SUS)}	I _C = 1A	180			V
Emitter-Base voltage	V _{E BO}	I _{EBO} = 10mA	10			V
Collector-Base leakage current	I _{CBO}	V _{CBO} = 250V			0.1	mA
Emitter-Base leakage current	I _{EBO}	V _{EBO} = 10V			10	mA
D.C. current gain	h _{FE}	I _C = 2A, V _C = 2V	1500	3000		
Collector-Emitter saturation voltage	V _{C E(Sat)}	I _C = 2A, I _B = 2mA			1.5	V
Base-Emitter saturation voltage	V _{B E(Sat)}				2.0	V
*1	t _{on}	I _C = 2A, I _{B1} = 5mA			1.7	μs
Switching time	t _{stg}	I _{B2} = -5mA, R _L = 10 ohm			15.0	μs
	t _r	P _w = 20μs Duty=<2%			18.0	μs

● Thermal characteristics

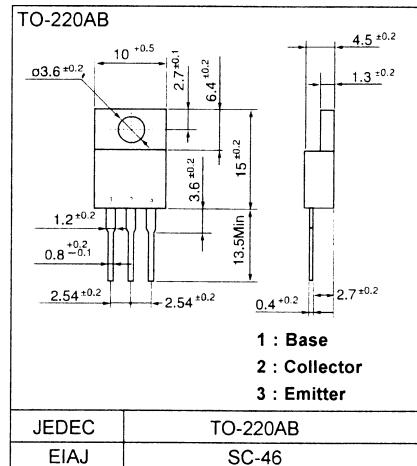
Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R _{th(j-c)}	Junction to case			5.0	°C/W

TELEPHONE: (973) 376-2922

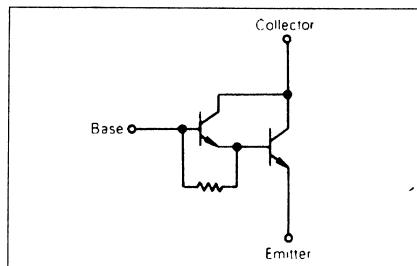
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■ Outline Drawings



■ Equivalent Circuit Schematic



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