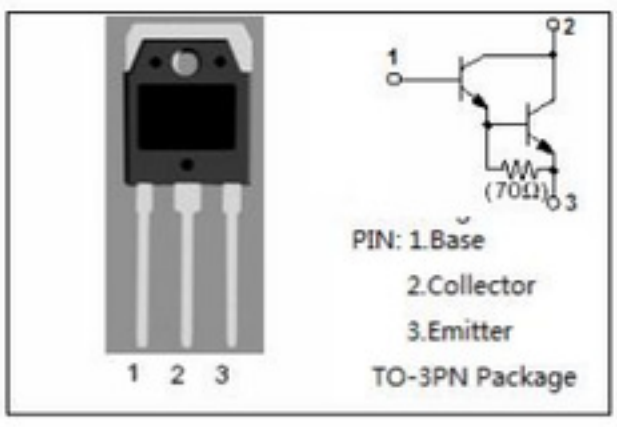
SPTECH Silicon NPN Darlington Power Transistor 2SD2390

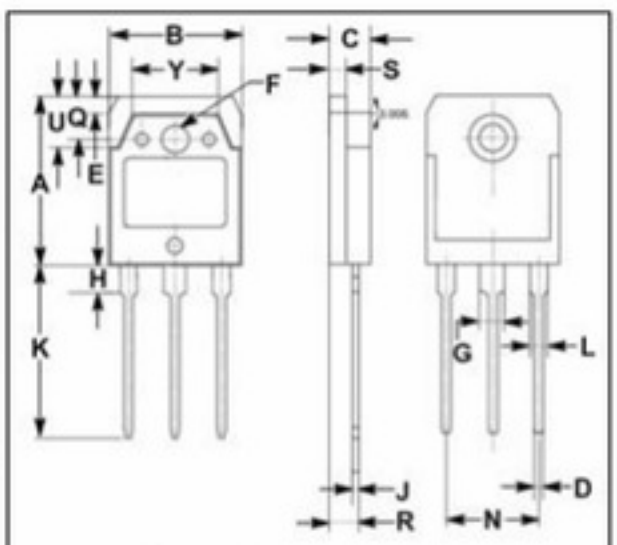
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 150V(Min)
- High DC Current Gain-
  : h_{FE}= 5000(Min.) @(I_C= 7A, V_{CE}= 4V)
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 2.5V(Max)@ (I_C= 7A, I_B= 7mA)
- Complement to Type 2SB1560



APPLICATIONS

- Designed for audio, series regulator and general purpose applications.



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @T_C=25℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

SPTECH Product Specification

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA ; I_B= 0	150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 7A; I_B= 7mA			2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 7A; I_B= 7mA			3.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 160V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 7A; V_{CE}= 4V	5000			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		95		pF
fr	Current-Gain—Bandwidth Product	I_E= -2A ; V_{CE}= 12V		55		MHz

Switching Times

t_{on}	Turn-on Time	V_{CC}= 70V, R_L= 10Ω , I_C= 7A; I_{B1}= -I_{B2}= 7mA,		0.5		μs
t_{stg}	Storage Time			10.0		μs
t_f	Fall Time			1.1		μs

◆ **h_{FE} Classifications**

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