

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: 2SD2438

Manufacturer: Sanken Electric USA Inc.

Package: TO-3P-3 Full Pack

Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/sanken-electric-usa-inc/2sd2438.html>

Request a Quote:

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Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

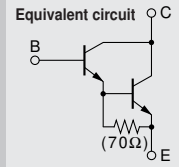
Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

Darlington

2SD2438



Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SB1587)

Application : Audio, Series Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

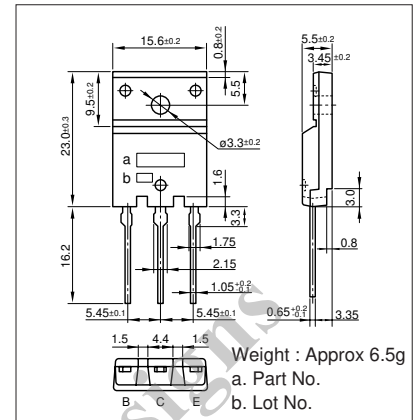
Symbol	Ratings	Unit
V _{CB0}	160	V
V _{CE0}	150	V
V _{EB0}	5	V
I _C	8	A
I _B	1	A
P _C	75(T _C =25°C)	W
T _J	150	°C
T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
I _{CB0}	V _{CB} =160V	100max	μA
I _{EB0}	V _{EB} =5V	100max	μA
V _{(BR)CEO}	I _C =30mA	150min	V
h _{FE}	V _{CE} =4V, I _C =6A	5000min*	
V _{CE(sat)}	I _C =6A, I _B =6mA	2.5max	V
V _{BE(sat)}	I _C =6A, I _B =6mA	3.0max	V
f _T	V _{CE} =12V, I _E =-1A	80typ	MHz
C _{OB}	V _{CB} =10V, f=1MHz	85typ	pF

*h_{FE} Rank Q(5000 to 12000), P(6500 to 20000), Y(15000 to 30000)

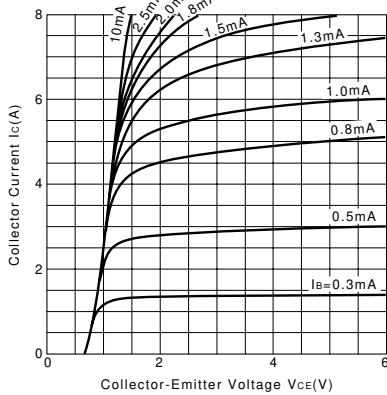
External Dimensions FM100(TO3PF)



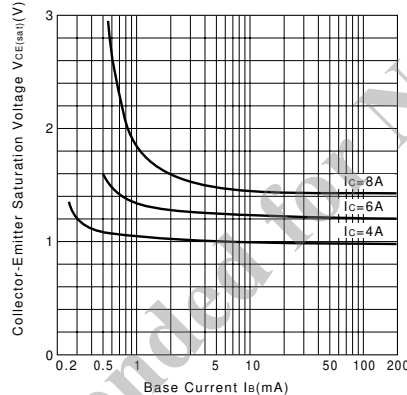
Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _C (A)	V _{BB1} (V)	V _{BB2} (V)	I _{B1} (mA)	I _{B2} (mA)	t _{on} (μs)	t _{stg} (μs)	t _f (μs)
60	10	6	10	-2	6	-6	0.6typ	10.0typ	0.9typ

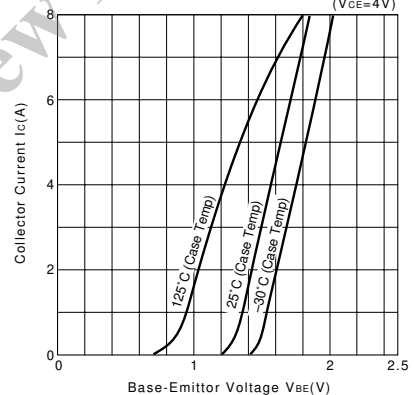
I_C-V_{CE} Characteristics (Typical)



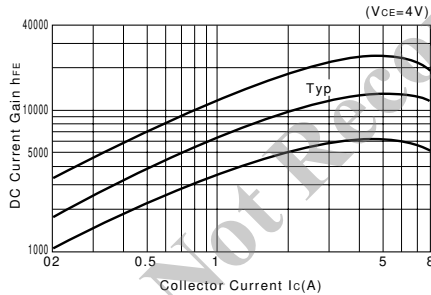
V_{CE(sat)}-I_B Characteristics (Typical)



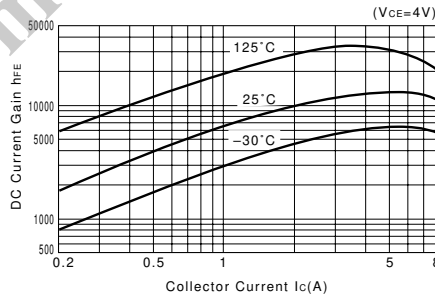
I_C-V_{BE} Temperature Characteristics (Typical)



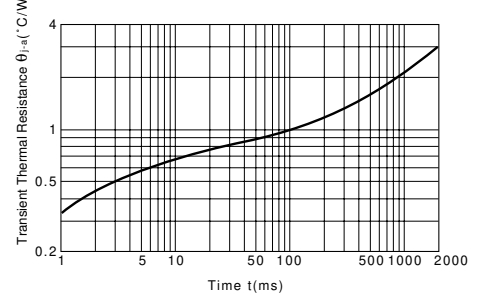
h_{FE}-I_C Characteristics (Typical)



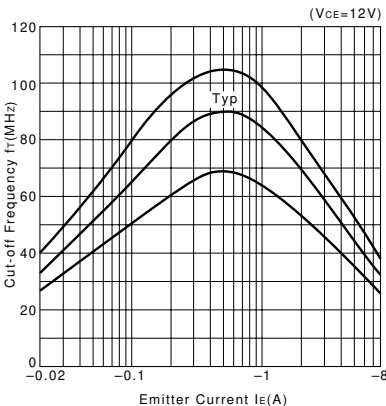
h_{FE}-I_C Temperature Characteristics (Typical)



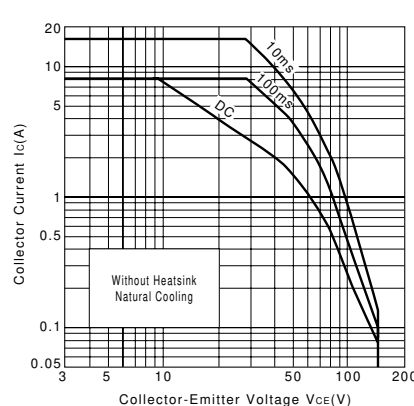
θ_{JA}-t Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

