

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: 2SC4138

Manufacturer: Sanken Electric USA Inc.

Package: TO-3P-3, SC-65-3

Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/sanken-electric-usa-inc/2sc4138.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

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.

2SC4138

Silicon NPN Triple Diffused Planar Transistor (High Voltage and High Speed Switching Transistor)

Application : Switching Regulator and General Purpose

Absolute maximum ratings (Ta=25°C)

Symbol	Ratings	Unit
VCBO	500	V
VCEO	400	V
VEBO	10	V
IC	10(Pulse20)	A
IB	4	A
PC	80(Tc=25°C)	W
Tj	150	°C
Tstg	-55 to +150	°C

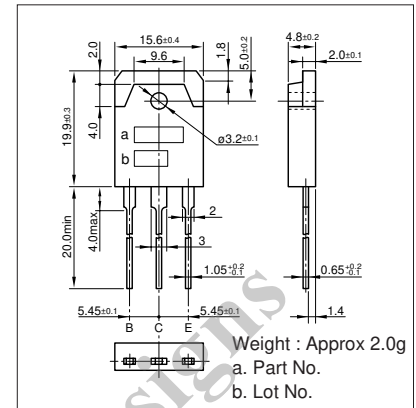
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings	Unit
ICBO	VCB=500V	100max	μA
IEBO	VEB=10V	100max	μA
V(BR)CEO	IC=25mA	400min	V
hFE	VCE=4V, IC=6A	10 to 30	
VCE(sat)	IC=6A, IB=1.2A	0.5max	V
VBE(sat)	IC=6A, IB=1.2A	1.3max	V
fT	VCE=12V, IE=-0.7A	10typ	MHz
COB	VCB=10V, f=1MHz	85typ	pF

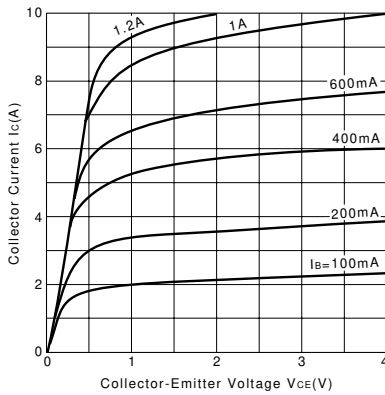
Typical Switching Characteristics (Common Emitter)

VCC (V)	RL (Ω)	IC (A)	VBB1 (V)	VBB2 (V)	IB1 (A)	IB2 (A)	ton (μs)	tstg (μs)	tf (μs)
200	33.3	6	10	-5	0.6	-1.2	1max	3max	0.5max

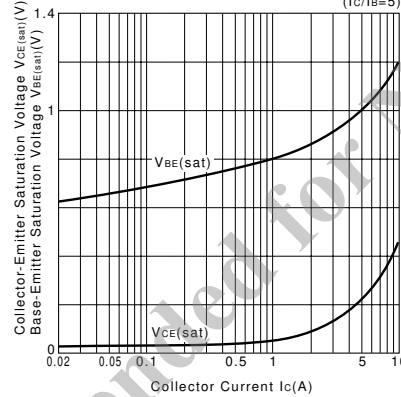
External Dimensions MT-100(TO3P)



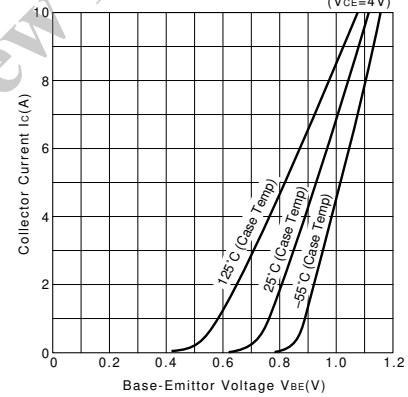
IC-VCE Characteristics (Typical)



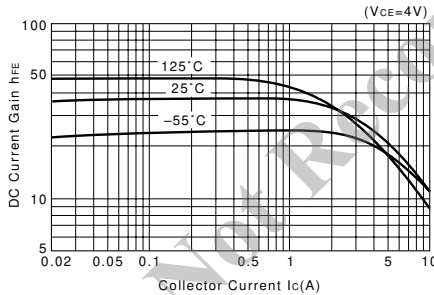
VCE(sat), VBE(sat)-IC Temperature Characteristics (Typical)



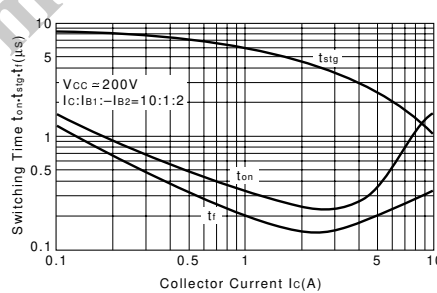
IC-VBE Temperature Characteristics (Typical)



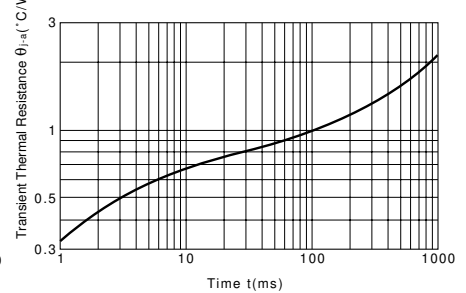
hFE-IC Characteristics (Typical)



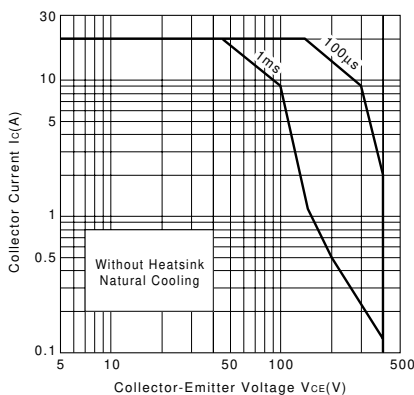
ton, tstg, tf-IC Characteristics (Typical)



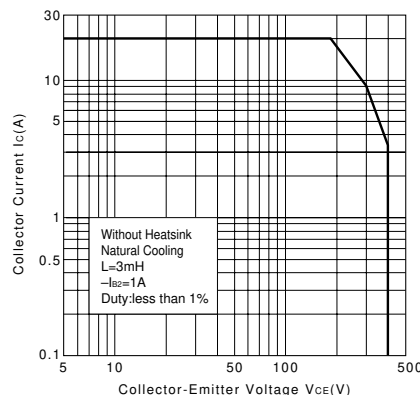
θJA-t Characteristics



Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area



PC-Ta Derating

