

DESCRIPTION

Mitsubishi 2SC3438 is a silicon NPN epitaxial type transistor designed for power supply, 20 to 40W output low frequency power amplifier drive application. Complementary with 2SA1368.

FEATURE

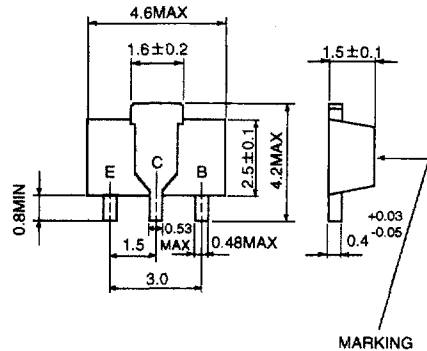
- High voltage $V_{CE0}=100V$
- High peak collector current ($I_{CM}=800mA$)
- High gain band width product $f_T=130MHz$ typ
- High collector dissipation $P_C=500mW$
- Small package for mounting

APPLICATION

Complementary drive for 20 to 40W amplifier, relay drive power supply etc.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

E : EMITTER
C : COLLECTOR
B : BASE

EIAJ : SC-62
JEDEC : -

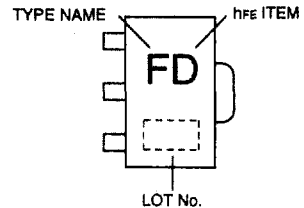
Note)

The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V_{CB0}	Collector to Base voltage	100	V
V_{EB0}	Emitter to Base voltage	5	V
V_{CE0}	Collector to Emitter voltage	100	V
I_{CM}	Peak Collector current	800	mA
I_C	Collector current	500	mA
P_C	Collector dissipation (Ta=25°C)	500	mW
T_J	Junction temperature	+150	°C
T_{stg}	Storage temperature	-55 to +150	°C

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

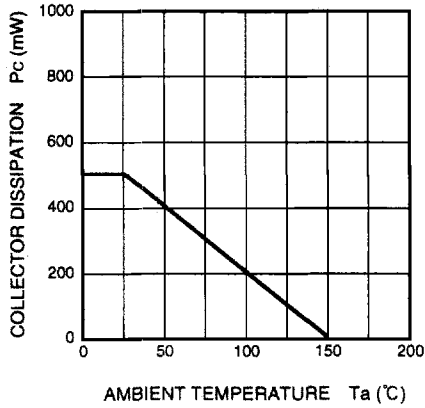
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=10\mu A, I_E=0$	100			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_C=0$	5			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=1mA, R_{BE}=\infty$	100			V
I_{CBO}	Collector cut off current	$V_{CB}=50V, I_E=0$			0.5	μA
I_{EBO}	Emitter cut off current	$V_{EB}=2V, I_C=0$			0.5	μA
h_{FE}^*	DC forward current gain	$V_{CE}=10V, I_C=10mA$	55		300	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=150mA, I_B=15mA$		0.15	0.5	V
f_T	Gain band width product	$V_{CE}=10V, I_E=-10mA$		130		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		7		pF

* : It shows hFE classification in right table.

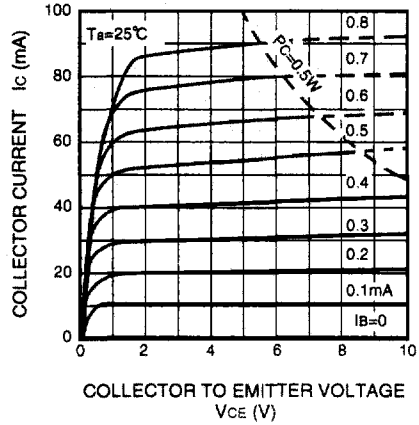
Marking	FC	FD	FE
hFE	55 to 110	90 to 180	150 to 300

TYPICAL CHARACTERISTICS

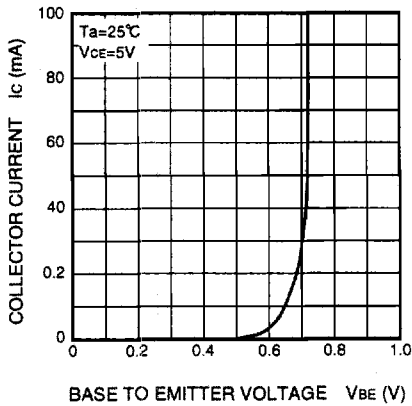
**COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE**



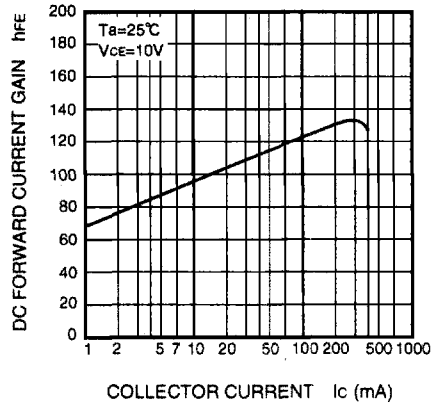
COMMON EMITTER OUTPUT



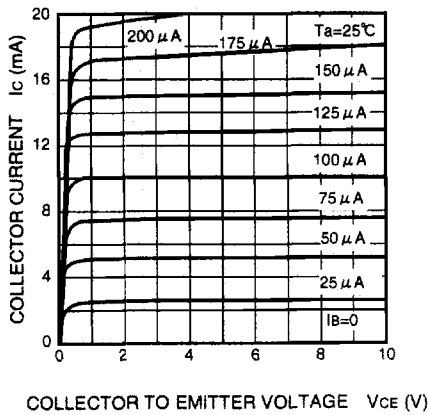
COMMON EMITTER TRANSFER



**DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT**



COMMON EMITTER OUTPUT



**GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT**

