Semefab

Over 150 million die shipped per year

NPN Bipolar
G133 Chip Family

DESCRIPTION

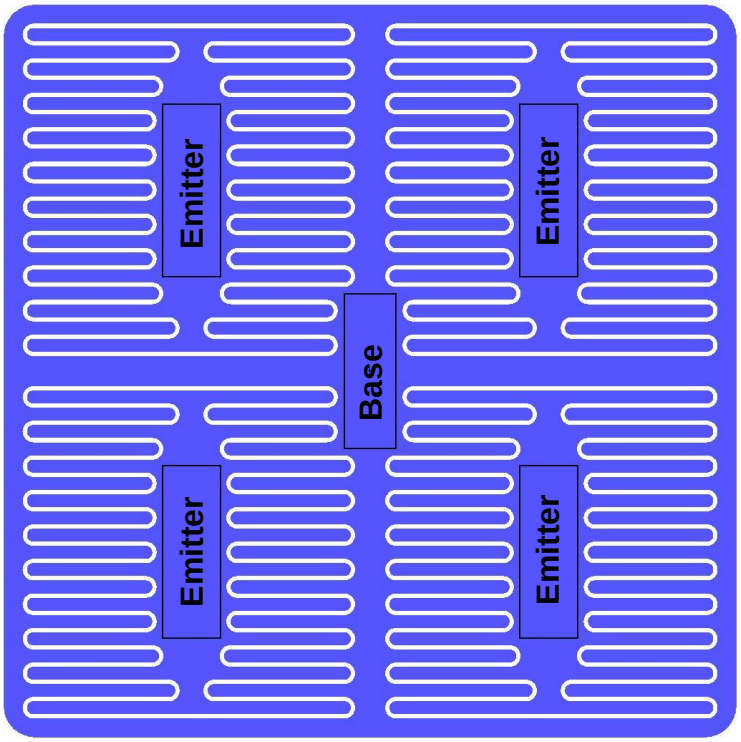
The G133 chip family is an NPN bipolar multi-epitaxial planar transistor intended for applications requiring fast switching, low saturation, high power robust devices.

FEATURES

- HIGH CURRENT - UP TO 160 AMPS
- HIGH VOLTAGE - UP TO 550 VOLTS (V_{CBO})
- FAST SWITCHING (t_f = 0.1µs)
- VERY LOW SATURATION VOLTAGES

1.0 PHYSICAL FEATURES

DIE SIZE	340 mils x 340 mils
DIE THICKNESS	550 micron
FRONT METALLISATION	5 micron Aluminium
BACK METALLISATION	0.75 micron Aluminium/Titanium/Nickel/Gold
BOND PAD SIZE	
Emitter	63 mils x 40 mils
Base	53 mils x 36 mils



www.semefab.com Tel: +44 1592 630630 Email: Info@semefab.com

Semefab	G133 Chip Family NPN Bipolar

2.0 TYPICAL CHARACTERISTICS

	G533	G633	G733	G333	G433	G233	Unit
V_{CBO}	200	280	320	400	450	550	V
V_{CEO}	85	120	150	200	240	285	V
I_C	160	140	135	125	110	95	A
$V_{CE(sat)}$ at 50% I_C	0.4	0.4	0.5	0.5	0.5	0.5	V
Similar to							

3.0 PROBED ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Symbol	Parameter	Test Conditions	Type	Min	Typ	Max	Unit
V_{CEO}	Collector - Emitter Breakdown Voltage	I_C = 1mA I_B = 0	G233	280	285		V
			G433	230	240		
			G333	179	200		
			G733	142	150		
			G633	116	120		
			G533	79	85		
I_{CES}	Collector Cut-Off Current	At specified BV_{CEO}	ALL			1	mA
I_{EBO}	Emitter-Base Cut-Off Current	V_{EB} = 11V I_C = 0	ALL			1	mA
hfe	DC Current Gain	I_C = 1A V_{CE} = 5V	G233	40		90	
			G433				
			G333				
			G733				
			G633				
			G533				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=1A I_B=0.1A	ALL			0.15	V

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