



Over 150 million die shipped per year

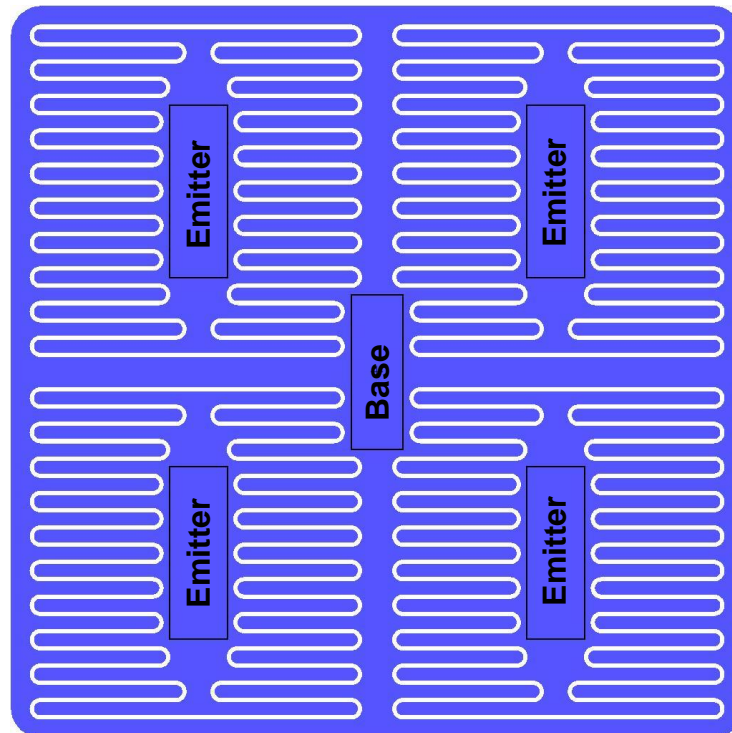
# G135 Chip Family

## NPN Bipolar

DESCRIPTION	FEATURES
<p>The G135 chip family is an NPN bipolar multi-epitaxial planar transistor intended for applications requiring fast switching, low saturation, high power robust devices.</p>	<ul style="list-style-type: none"> <li>• HIGH CURRENT - UP TO 100 AMPS</li> <li>• HIGH VOLTAGE - UP TO 550 VOLTS (<math>V_{CBO}</math>)</li> <li>• FAST SWITCHING (<math>t_f = 0.1\mu s</math>)</li> <li>• VERY LOW SATURATION VOLTAGES</li> </ul>

### 1.0 PHYSICAL FEATURES

DIE SIZE	280 mils x 280 mils
DIE THICKNESS	550 micron
FRONT METALLISATION	5 micron Aluminium
BACK METALLISATION	0.75 micron Aluminium/Titanium/Nickel/Gold
BOND PAD SIZE	
Emitter	59 mils x 20 mils
Base	53 mils x 18 mils





# G135 Chip Family

## NPN Bipolar

### 2.0 TYPICAL CHARACTERISTICS

	G535	G635	G735	G335	G435	G235	Unit
$V_{CBO}$	200	280	320	400	450	550	V
$V_{CEO}$	85	120	150	200	240	285	V
$I_C$	100	90	85	80	70	60	A
$V_{CE(sat)}$ at 50% $I_C$	0.4	0.4	0.5	0.5	0.5	0.5	V
Similar to	BUP48 MJ14000 MJ14002	BUP49 BUP50		BUP51		BUP52, 53, 54 BUV61, 62 BUS51, 52 BUR51, 52	

### 3.0 PROBED ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Test Conditions	Type	Min	Typ	Max	Unit
$V_{CEO}$	Collector - Emitter Breakdown Voltage	$I_C = 1\text{mA}$ $I_B = 0$	G235	280	285		V
			G435	230	240		
			G335	179	200		
			G735	142	150		
			G635	116	120		
			G535	79	85		
$I_{CES}$	Collector Cut-Off Current	At specified $BV_{CEO}$	ALL			1	mA
$I_{EBO}$	Emitter-Base Cut-Off Current	$V_{EB} = 11\text{V}$ $I_C = 0$	ALL			1	mA
$h_{fe}$	DC Current Gain	$I_C = 1\text{A}$ $V_{CE} = 5\text{V}$	G235	40		90	
			G435				
			G335				
			G735				
			G635				
			G535				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}$ $I_B=0.1\text{A}$	ALL			0.15	V



G135 Chip Family

NPN Bipolar

Semefab Ltd. may change this specification at any time without notification.

Supply of products conforms to Semefab Ltd.'s Terms and Conditions.

#### **LIFE SUPPORT APPLICATIONS**

This product is not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury.

Semefab Ltd. customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Semefab Ltd. for any damages resulting from such improper use or sale.