



Over 150 million die shipped per year

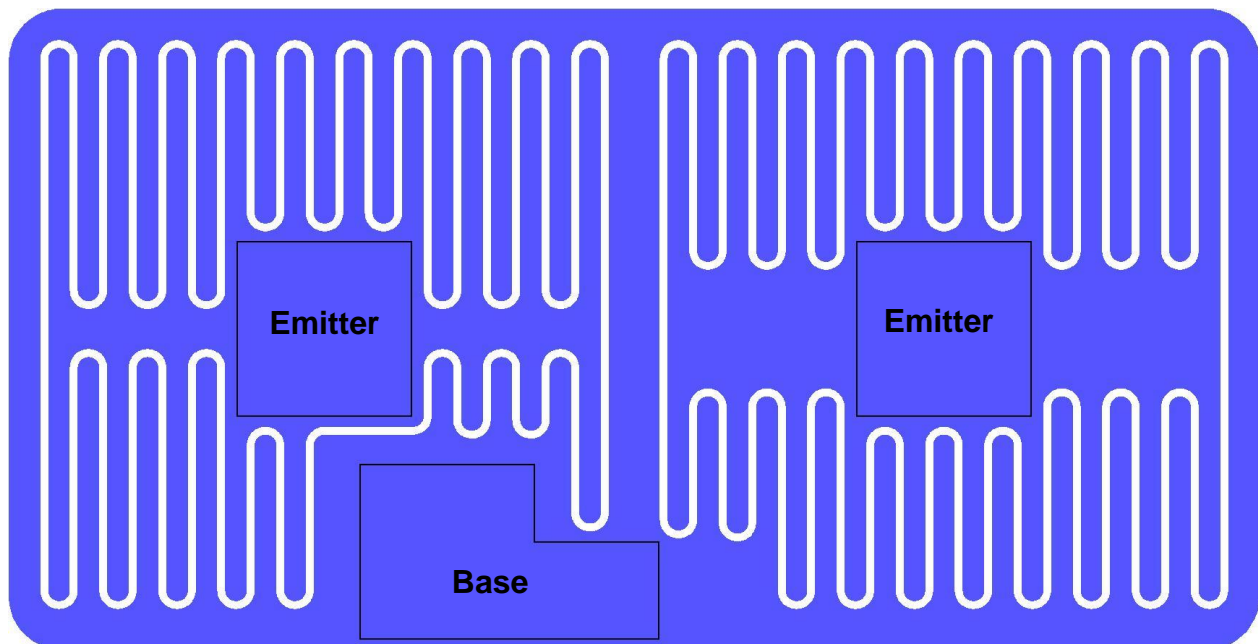
# G136 Chip Family

## NPN Bipolar

DESCRIPTION	FEATURES
<p>The G136 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 55 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	175 mils x 310 mils
DIE THICKNESS	550 micron
FRONT METALLISATION	5 micron Aluminium
BACK METALLISATION	0.75 micron Aluminium/Titanium/Nickel/Gold
BOND PAD SIZE	
Emitter	38 mils x 38 mils
Base	38 mils x 66 mils





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### 2.0 TYPICAL CHARACTERISTICS

	G536	G636	G736	G336	G436	G236	Unit
$V_{CBO}$	200	280	320	400	450	550	V
$V_{CEO}$	85	120	150	200	240	285	V
$I_C$	55	50	45	45	40	35	A
$V_{CE(sat)}$ at 50% $I_C$	0.4	0.4	0.5	0.5	0.5	0.5	V
<b>Similar to</b>	BUP46 BUW38 BUW39 BUV18	BUP47 BUV19 BUV20 BUV50			BUV51 BUW51 BUW61	BUP55 BUR22 BUV52	

### 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	$I_C = 1\text{mA}$ $I_B = 0$	G236	280	285		V
			G436	230	240		
			G336	179	200		
			G736	142	150		
			G636	116	120		
			G536	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	$I_C = 1\text{A}$ $V_{CE} = 5\text{V}$	G236	40		90	
			G436				
			G336				
			G736				
			G636				
			G536				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}$ $I_B=0.1\text{A}$	ALL			0.15	V



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