

# DATA SHEET

# BFG425W

## FEATURES

- Very high power gain
- Low noise figure
- High transition frequency
- Emitter is thermal lead
- Low feedback capacitance.

## APPLICATIONS

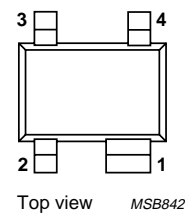
- RF front end
- Wideband applications, e.g. analog and digital cellular telephones, cordless telephones (PHS, DECT, etc.)
- Radar detectors
- Pagers
- Satellite television tuners (SATV)
- High frequency oscillators.

## DESCRIPTION

NPN double TY wideband transistor with buried layer for low voltage applications in a plastic, 4-pin dual-emitter SOT343R package.

## PINNING

PIN	DESCRIPTION
1	emitter
2	base
3	emitter
4	collector



Marking code: P5.

Fig.1 Simplified outline SOT343R.

## QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_{CB0}$	collector-base voltage	open emitter	–	–	10	V
$V_{CEO}$	collector-emitter voltage	open base	–	–	4.5	V
$I_C$	collector current (DC)		–	25	30	mA
$P_{tot}$	total power dissipation	$T_s \leq 103\text{ }^\circ\text{C}$	–	–	135	mW
$h_{FE}$	DC current gain	$I_C = 25\text{ mA}; V_{CE} = 2\text{ V}; T_j = 25\text{ }^\circ\text{C}$	50	80	120	
$C_{re}$	feedback capacitance	$I_C = 0; V_{CB} = 2\text{ V}; f = 1\text{ MHz}$	–	95	–	fF
$f_T$	transition frequency	$I_C = 25\text{ mA}; V_{CE} = 2\text{ V}; f = 2\text{ GHz}; T_{amb} = 25\text{ }^\circ\text{C}$	–	25	–	GHz
$G_{max}$	maximum power gain	$I_C = 25\text{ mA}; V_{CE} = 2\text{ V}; f = 2\text{ GHz}; T_{amb} = 25\text{ }^\circ\text{C}$	–	20	–	dB
F	noise figure	$I_C = 2\text{ mA}; V_{CE} = 2\text{ V}; f = 2\text{ GHz}; \Gamma_S = \Gamma_{opt}$	–	1.2	–	dB

## CAUTION

This product is supplied in anti-static packing to prevent damage caused by electrostatic discharge during transport and handling. For further information, refer to TY specs.: SNW-EQ-608, SNW-FQ-302A and SNW-FQ-302B.