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N- CHANNEL MOSFET in a SOT-23 Plastic Package.

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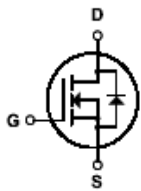
Super high dense cell design for low $R_{DS(ON)}$, SOT-23 package, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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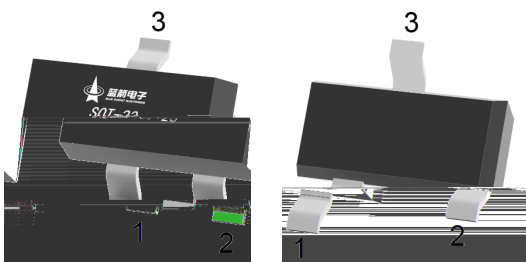
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Battery management, High speed switch, low power DC to DC converter, Meet the stringent requirements of automotive applications.

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PIN1 y G

PIN 2 y S

PIN 3 y D

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Marking	C2Q
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Static Characteristics ;

@ f Parameter		... Z Symbol	f > Rating	% y Unit
Drain-Source Voltage		V _{DSS}	20	V
Gate-Source Voltage		V _{GSS}	±12	V
Drain Current – Continuous		I _D	6.5	A
Pulsed Drain Current		I _{DM}	38	A
Power Dissipation		P _D	1.3	W
Storage Temperature Range		T _{stg}	-55 150	
Maximum Junction-to-Ambient	t ≤ 10s	R _{JA}	90	/W
Maximum Junction-to-Ambient	Steady-State		125	
Maximum Junction-to-Lead	Steady-State	R _{JL}	80	

Dynamic Characteristics ;

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =250 A	0.5	0.9	1.2	V
Drain–Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0 I _D =250 A	20	21		V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0 V _{DS} =20V			1.0	A
Gate–Body Leakage.	I _{GSS}	V _{GS} =±12V V _{DS} =0V			±100	nA
Static Drain–Source On–Resistance	R _{DS(on)1}	V _{GS} =4.5V I _D =5.0A		16.5	33	m
	R _{DS(on)2}	V _{GS} =2.5V I _D =4.5A		23.5	40	m
	R _{DS(on)3}	V _{GS} =1.8V I _D =4.0A			51	m
Drain–Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _D =1A		0.78	1.2	V

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@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Input Capacitance	Ciss	V _{GS} =0V, V _{DS} =10V f=1MHz		860		pF
Output Capacitance	Coss			800		
Reverse Transfer Capacitance	Crss			495		
Gate resistance	Rg	V _{GS} =0V, V _{DS} =0V f=1MHz		4.9		i
Total Gate Charge	Qg(4.5V)	V _{GS} =4.5V, V _{DS} =10V I _D =6.5A		7		nC
Gate Source Charge	Qgs			1		
Gate Drain Charge	Qgd			2		
Turn-On Delay Time	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V R _L =1.54 Ý, R _{GEN} =3 Ý		7		ns
Turn-On Rise Time	t _r			10		
Turn-Off Delay Time	t _{d(off)}			32		
Turn-Off Fall Time	t _f			11		

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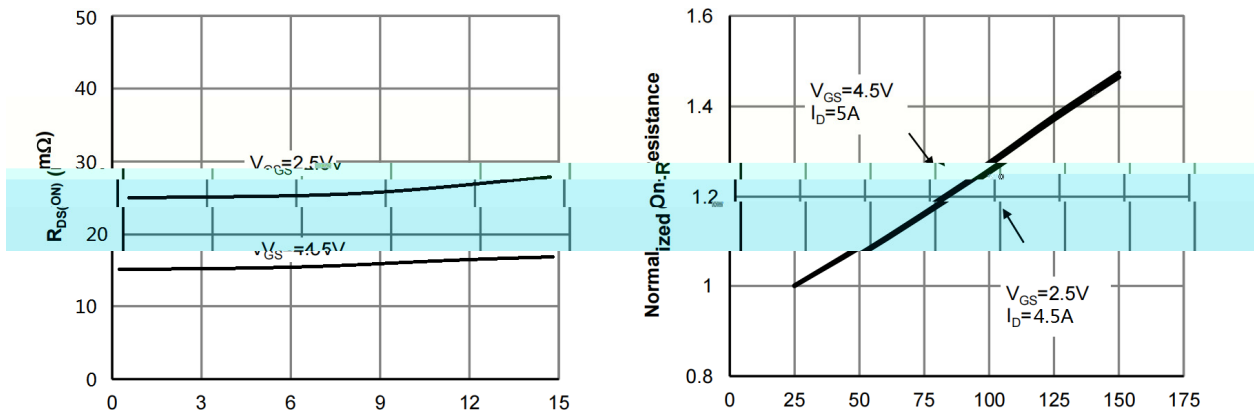
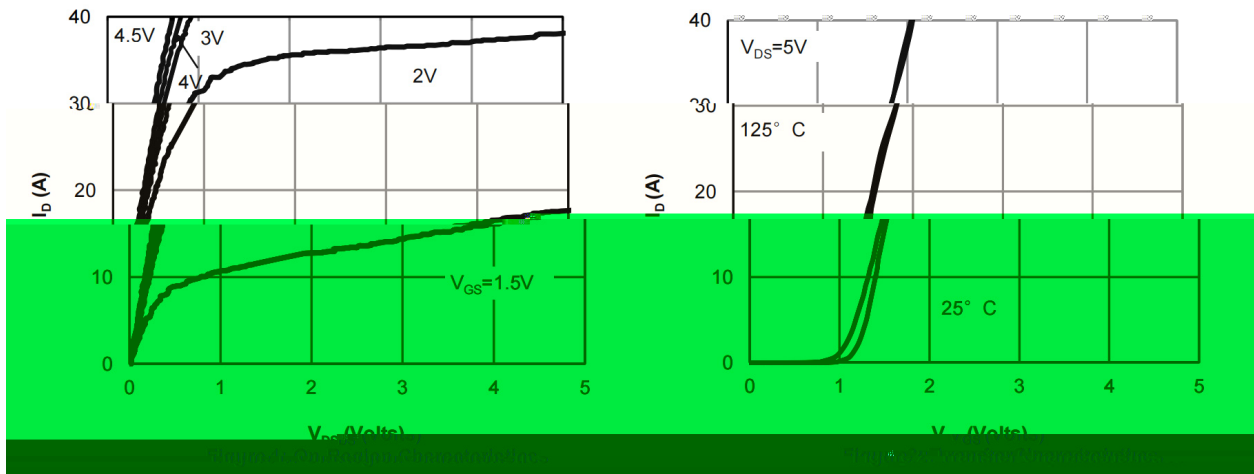


Figure 3: On-Resistance vs. Drain Current and Gate Voltage
 Figure 4: On-Resistance vs. Junction Temperature

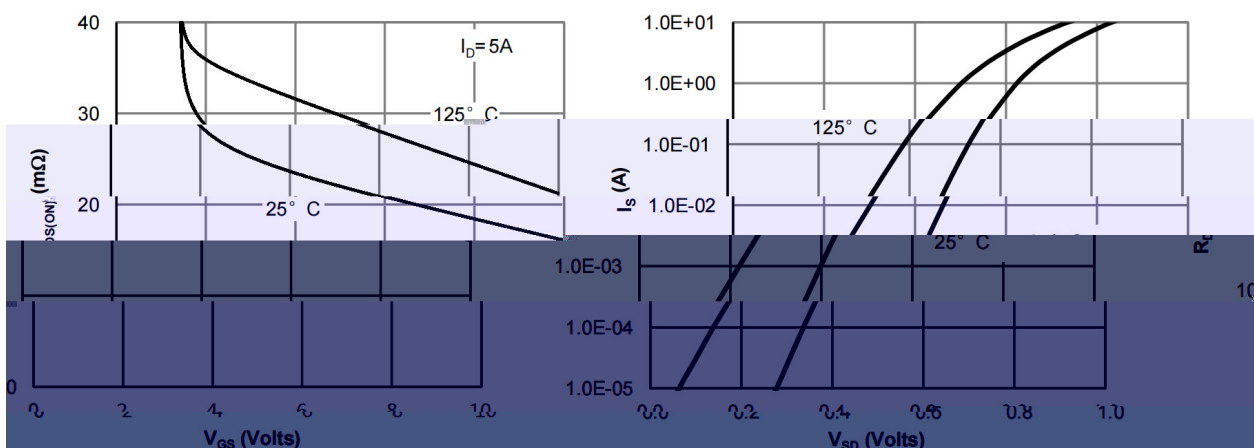
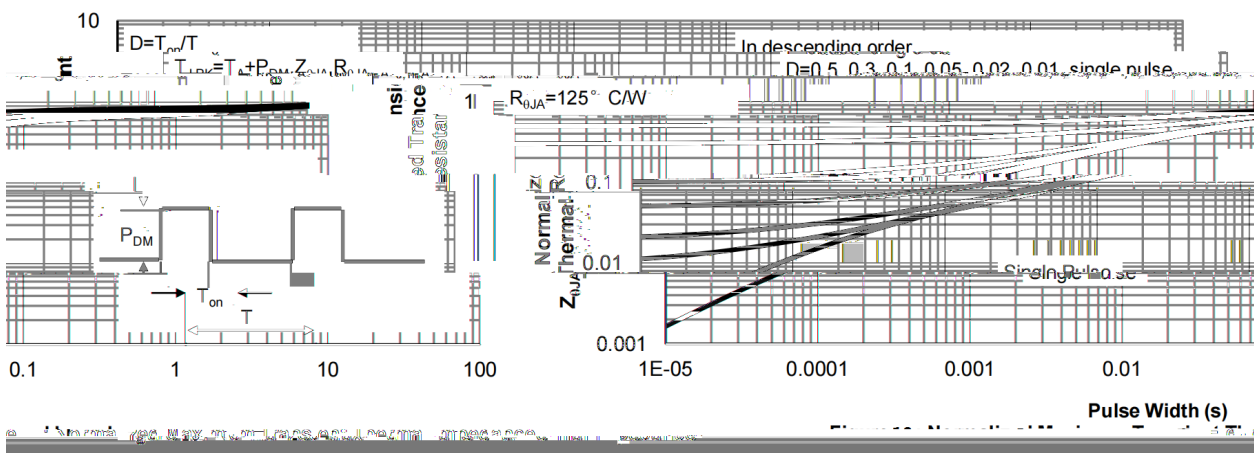
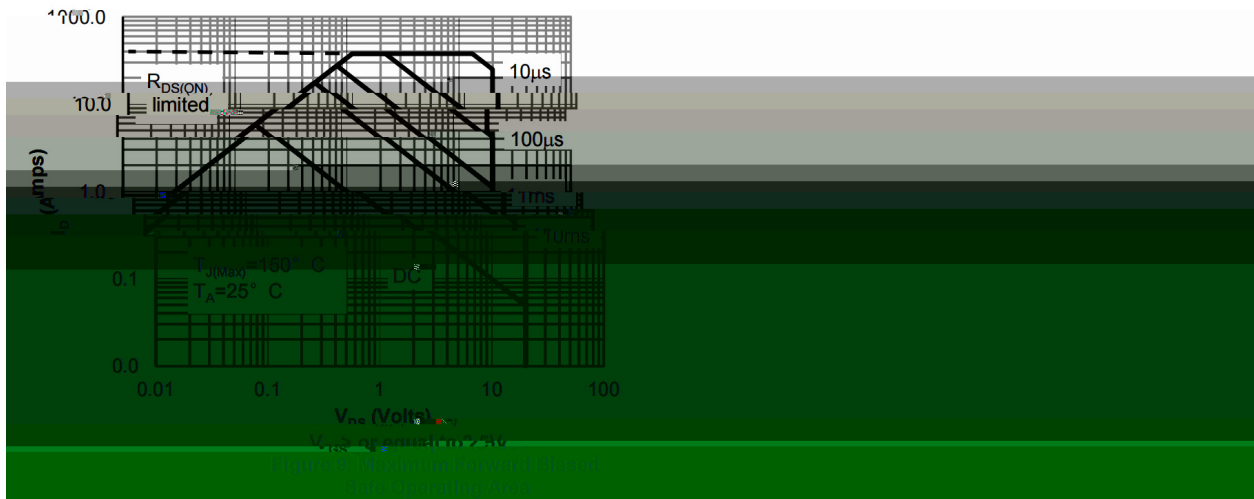
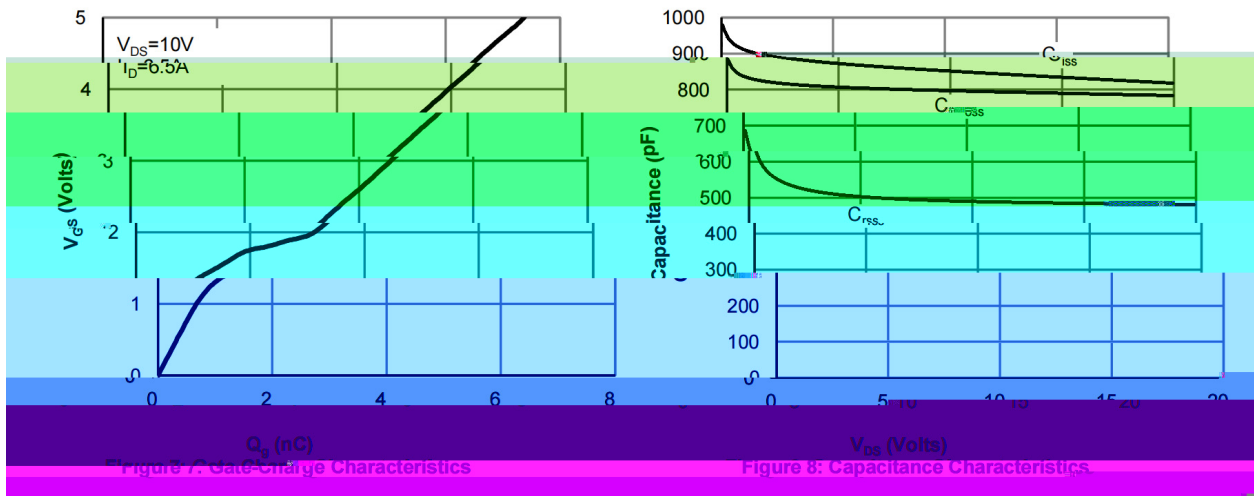


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

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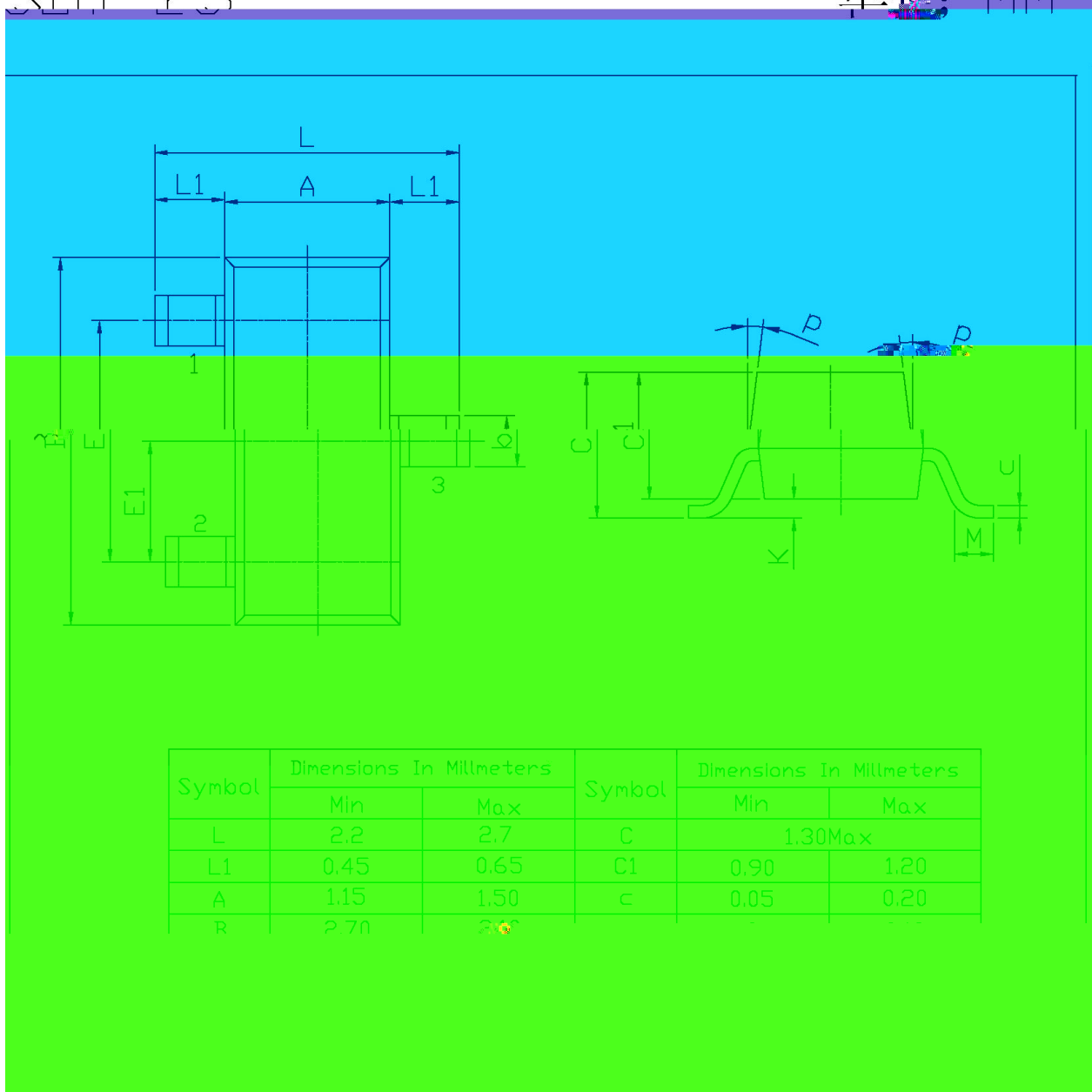


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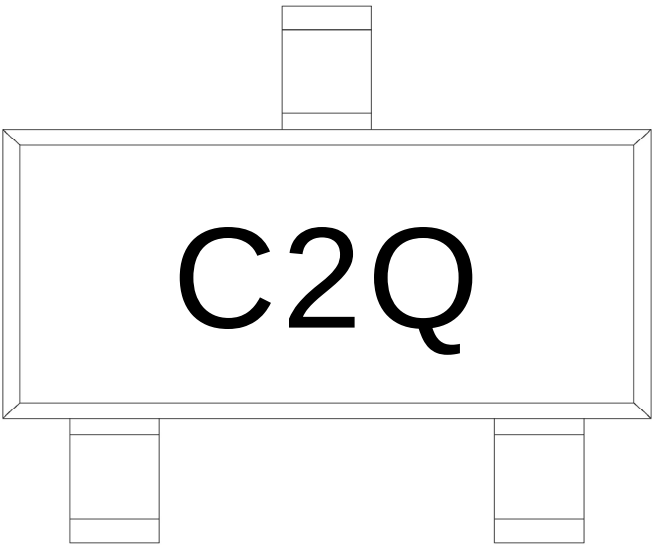
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SOT-23

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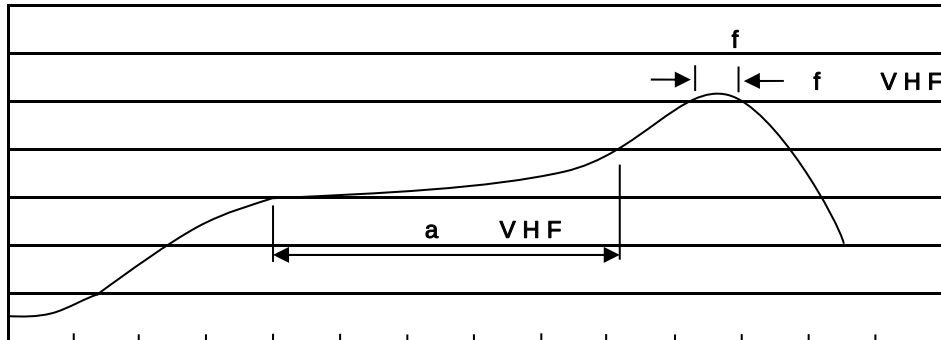
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Note:
C2 y Product Type Code
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7HP SHUDWXXUH



7LPH VHF

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Note:

- 10• Ä ½ “† 150 ½200 - k ž • 60 ½120sec; 1.Preheating:150~200 - , Time:60~120sec.
- 20• Q > “† 255 r5 - k ž • 4 Ò 5 r0.5sec; 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
- 30•D N ò i Ò 0 ,† 2 ½10 - /sec. 3. Cooling Speed: 2~10 - /sec.

 ÂD /Cã p⁻ »]

“†y 260 r5 - ž • y 10 r1 sec. Temp.:260 r5 - Time:10 r1 sec

GP á

2 & x / REEL

Package Type 7>û ~ E	Units ;>û !H					Dimension ;>û p . (unit /mm ³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	s × 8	180×120×180	390×385×205

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